

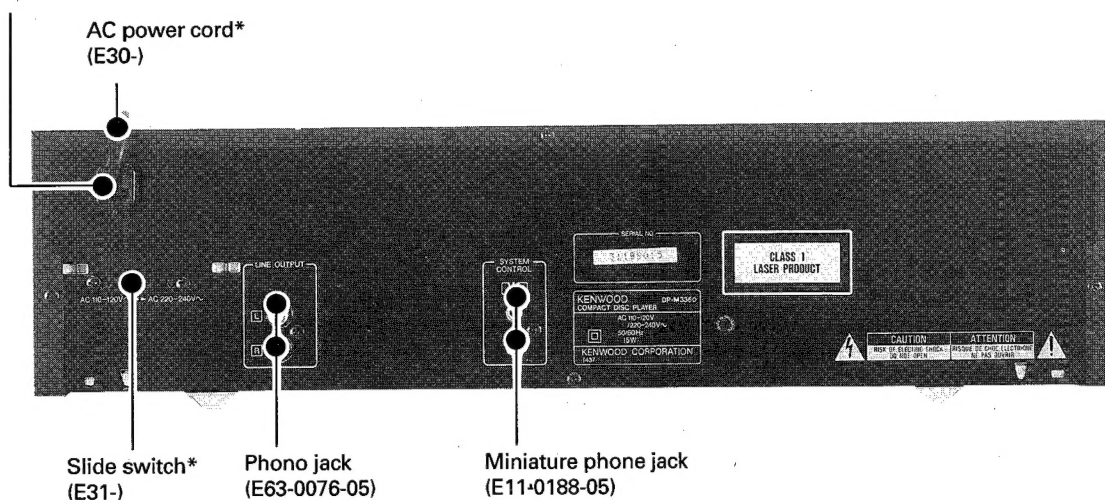
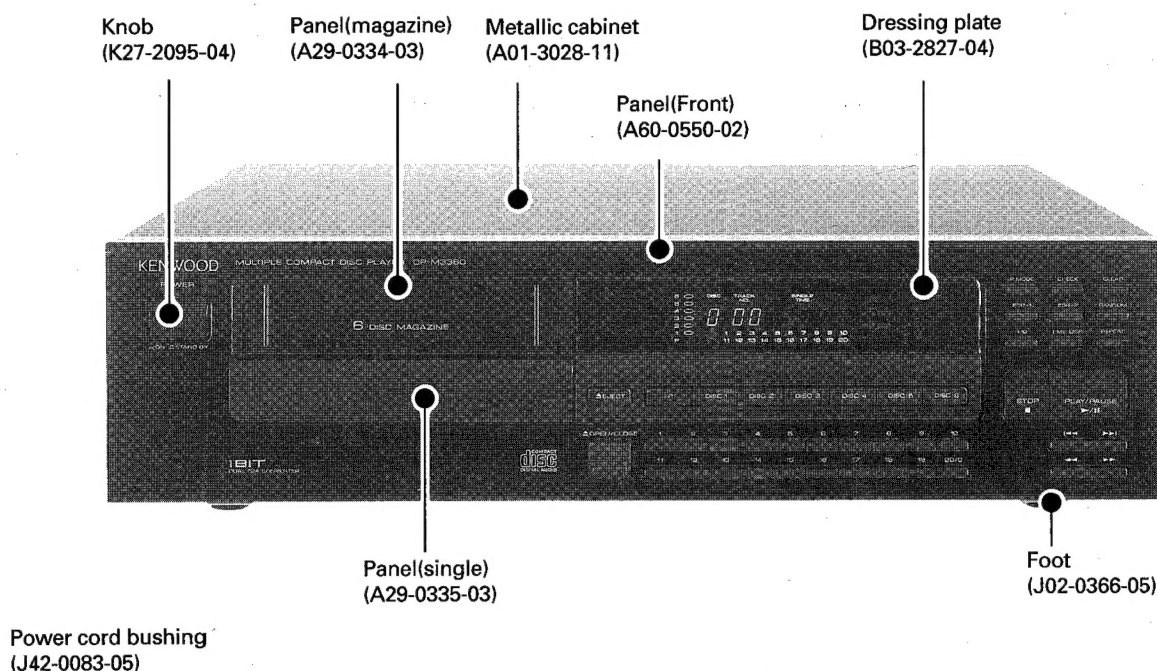
MULTIPLE COMPACT DISC PLAYER

DP-M3360/M5560/M6060

SERVICE MANUAL

KENWOOD

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B51-4882-00(K) 3811



In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No.21 CFR 1040. 10, Chapter 1, Subchapter J.

**DANGER : Laser radiation when open and interlock defeated.
AVOID DIRECT EXPOSURE TO BEAM.**

Photo is DP-M3360.

***Refer to parts list on page 29.**

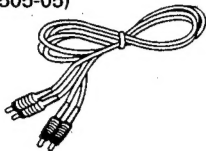
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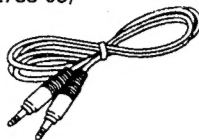
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ACCESSORIES

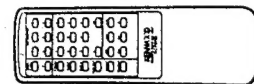
- Audio cord 1
(E30-0505-05)



- System control cord 1
(E30-2733-05)

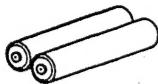


- Remote control unit 1
(A70-0977-05)



Battery cover(A09-0170-08)

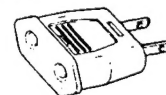
- Batteries(R6/AA) 2
(-)



- Magazine 1
(With 6 disc trays)
(J19-3578-03)



- AC plug adaptor(M type only).....1
(E03-0115-05)

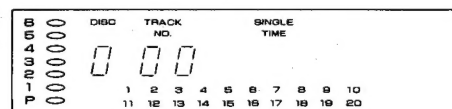


(Except for some areas)
For the unit with a European
AC plug in areas other than Europe.

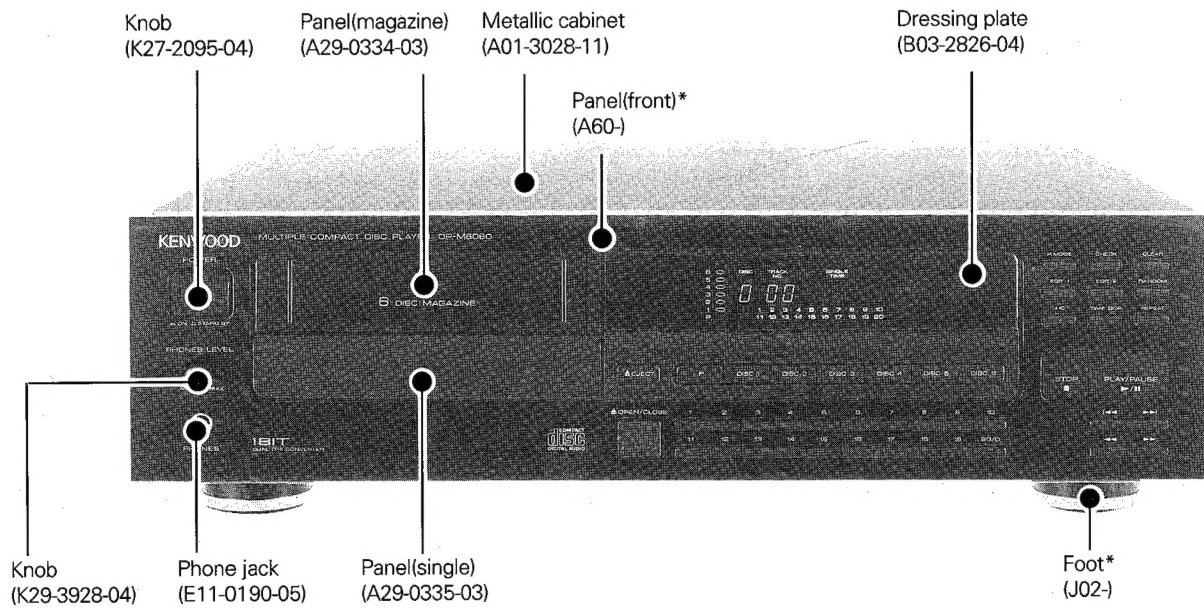
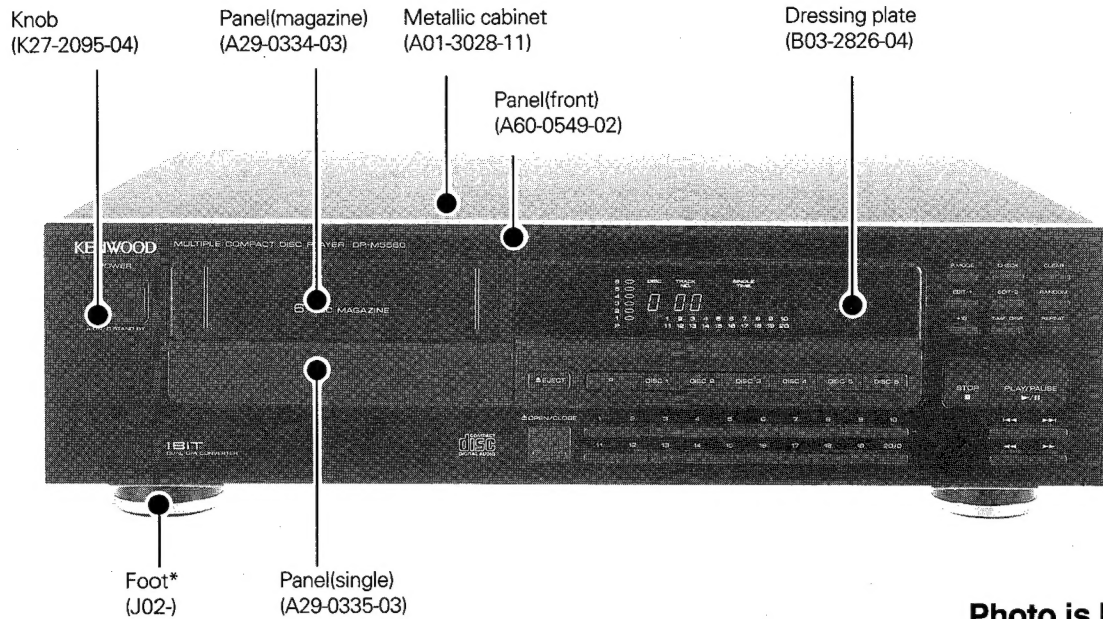
• Note related to transportation and movement

Before transporting or moving this unit, carry out the following operations.

1. Turn the power ON but do not load a disc or magazine.
2. Wait a few seconds and verify that the display shown appears.
3. Turn the power OFF.



EXTERNAL VIEW



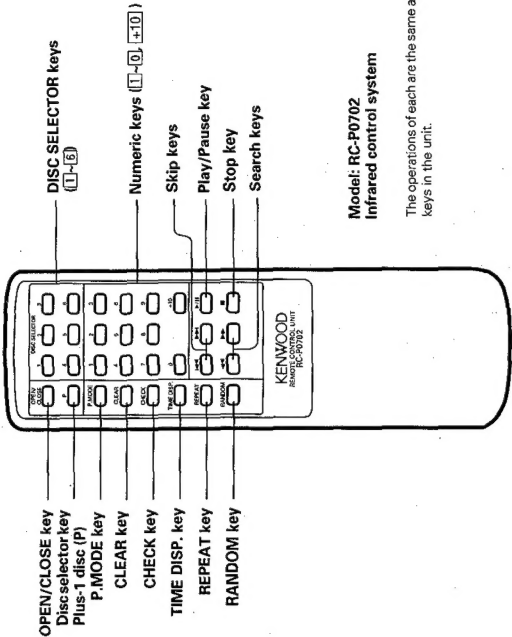
Note:

The rear panel view of DP-M6060 and DP-M5560 is same layout as DP-M3360.

Photo is DP-M6060

*Refer to parts list on page 29.

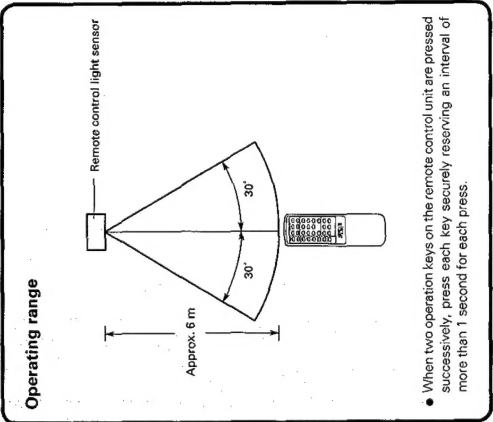
CONTROLS/REMOTE CONTROL



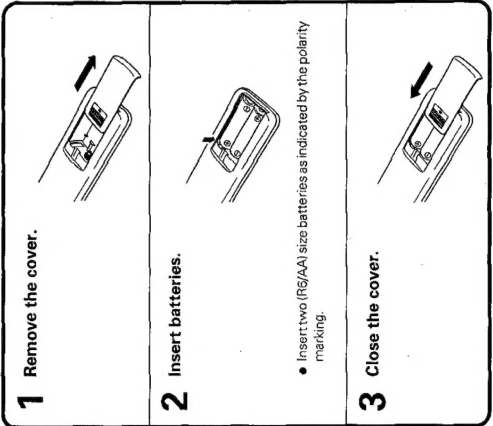
Model: RC-P0702
Infrared control system

The operations of each are the same as those of the keys in the unit.

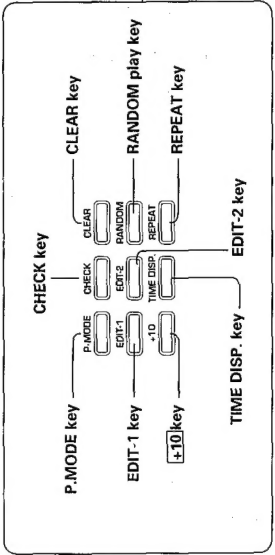
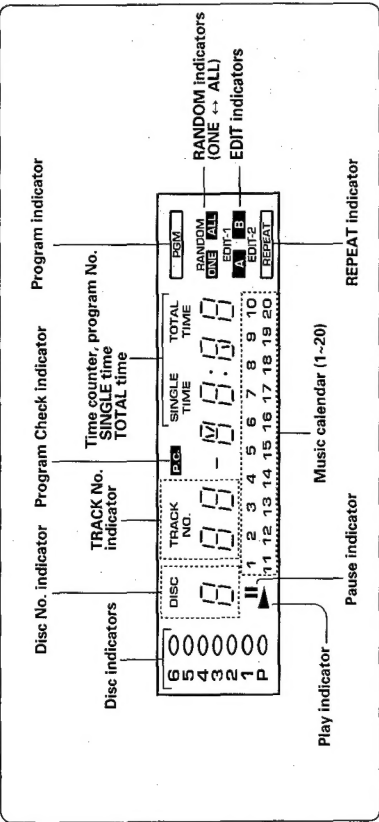
■ Operation procedure



■ Loading batteries



- Notes:
1. The supplied batteries are intended for use in operation checks. Therefore, their lives may be shorter than ordinary batteries.
 2. When the remote-controllable distance gets shorter than before, replace both batteries with new ones.
 3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote control light sensor. In such a case, change the system installation position to prevent the malfunction.

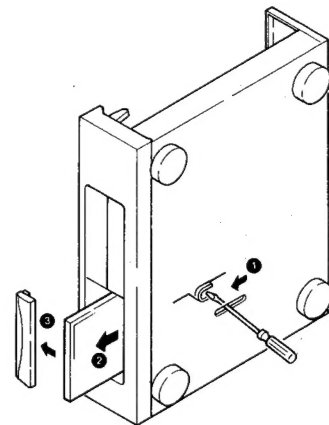


DISASSEMBLY FOR REPAIR

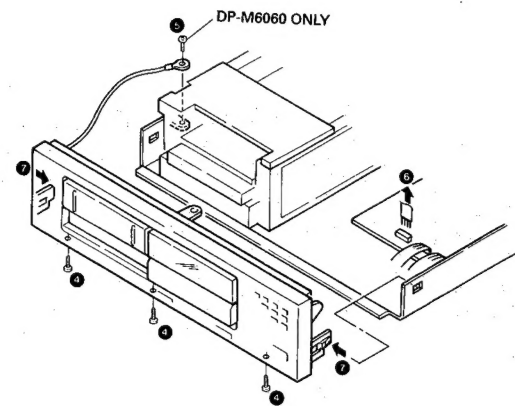
1. How to Disassemble

* When the power can not be turn ON, or when the tray can not be opened by pressing the OPEN key.

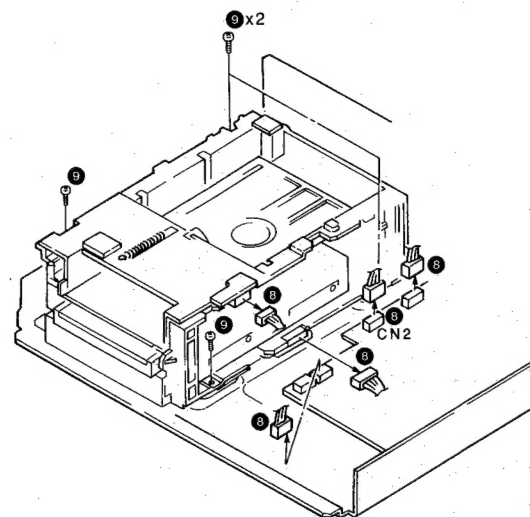
1. Insert the screw driver to the bottom hole and slide the lever frontwards with screw driver(1).
2. Pull out the tray(2).
3. Remove the tray's panel(3), and push the tray backwards.



4. Remove the front panel screws(4).
5. Remove the GND wire screw(DP-M6060 only)(5).
6. Remove cable(6).
7. Disengage the stoppers of the both side of the front panel(7).



8. Remove 5 connectors(8).
9. Remove mechanism screws(9).

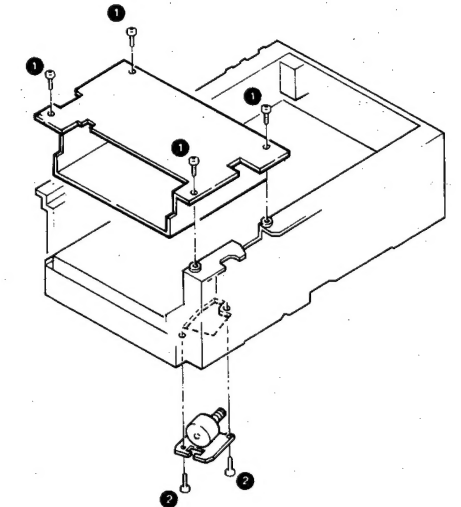


DISASSEMBLY FOR REPAIR

2. How to Replace the Pickup

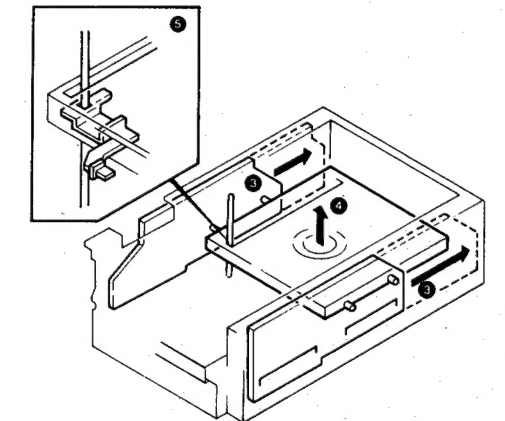
*The following description is the unit of the mechanism only.

1. Remove magazine plate ass'y screws(1).
2. Remove Vertical Motor Screws(2).

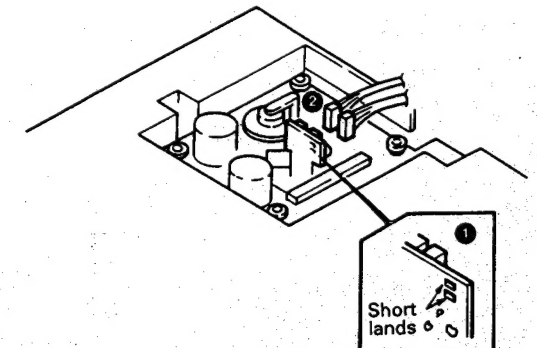


3. Slide the both of sliders backwards(3), and remove the holder upwards(4).

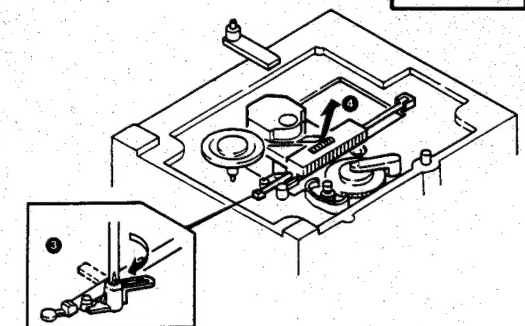
Note : If mounting the holder, set the shaft to holder as figure(5).
If mounting the sliders, set the sliders to fully backward position(dot line in figure).



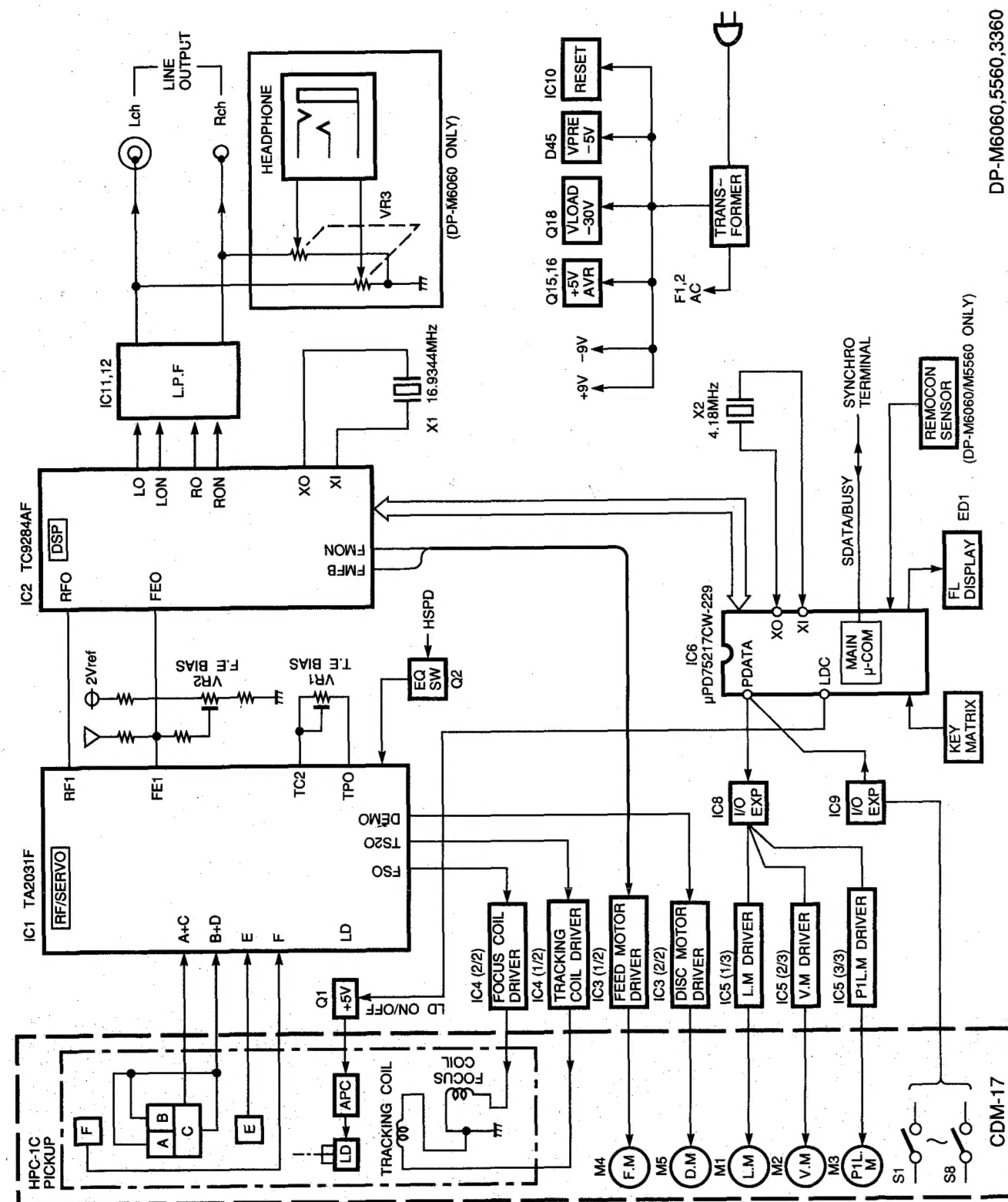
4. Turn the unit upside down, and solder the short land of the pickup(1).
5. Remove 2 connectors(2).



6. Turn the stopper(3).
7. Remove the pickup upwards(4).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. Test Mode

Setting the test mode

This microprocessor can be put the test mode by just short-circuiting the test pins(#8 and #9) even in the test mode (normal condition).

No.	Input key	Function	Display
1	STOP	(1) Focusing servoOFF (2) Tracking servoOFF (3) Feed servoOFF	01
2	REPEAT	(1) LaserON (In STOP mode only)	02
3	CHECK	(1) Focusing servoON (2) Tracking servoOFF (3) Feed servoOFF	03
4	CLEAR	(1) Focusing servoON (2) Tracking servoON (3) Feed servoOFF	04
5	PLAY	(1) Focusing servoON (2) Tracking servoON (3) Feed servoON	05
6	DIS C1	Load No.1 disc to No.6 in order.	"A"BLINK
7	DIS C2	Read the TOC(table of contents) of disc No.3 to No.6 in order. TEST mode is cancelled after reading the TOC of No.6 disc, and then playback the 1st track.	"B"BLINK
8	P.MODE	Track No.7, 8 and 6 are programmed, and playback (Track No.6 is played back under double speed. Also, TEST mode is cancelled).	
9	DISC3-6	Load the decided No. disc which is pressed by the disc key and set to STOP mode. ex. Disc No.4 key is pressed (PLAY, CHECK and CLEAR keys are available to operate).	
10	UP	Turns all FL display lamps ON.	

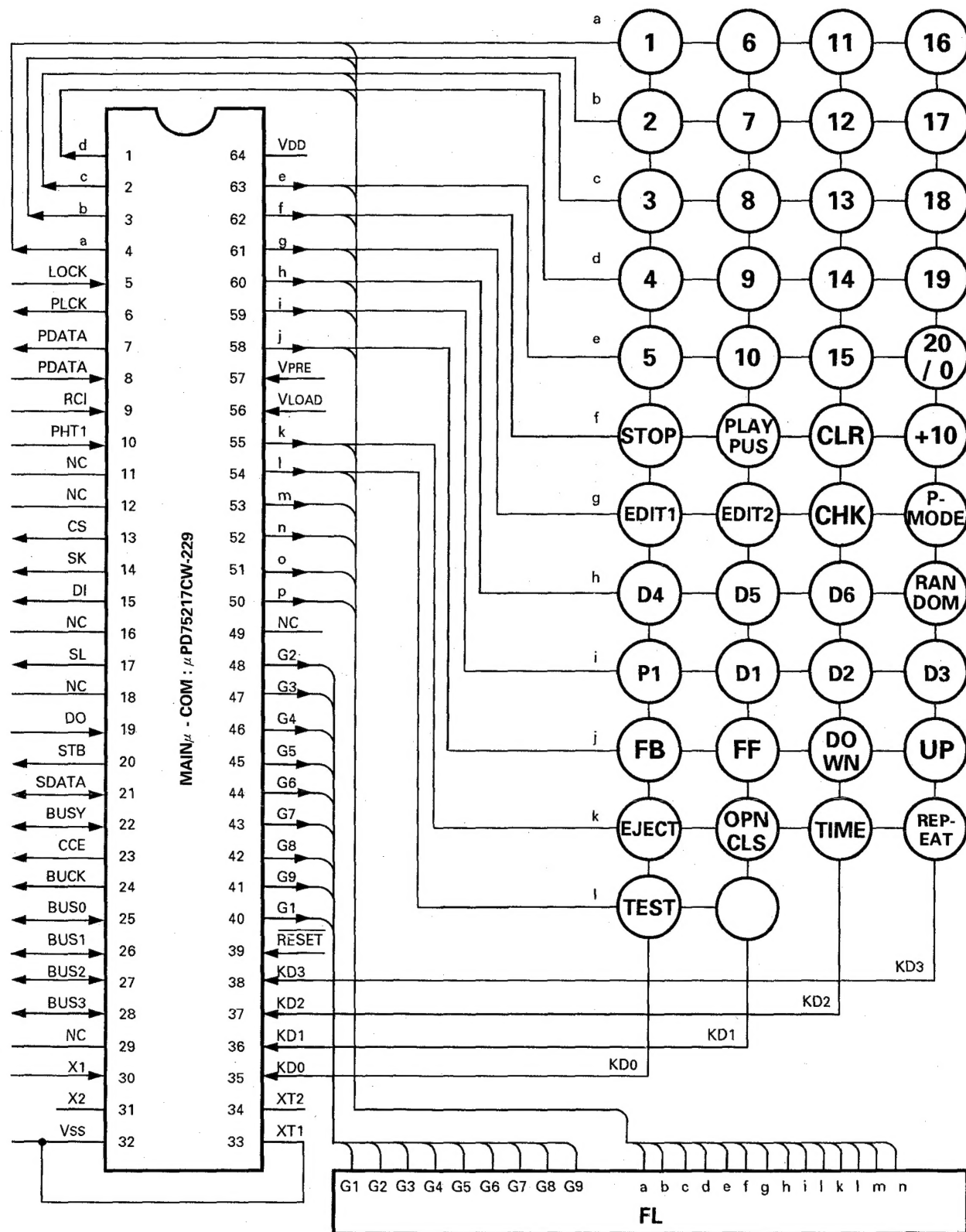
CIRCUIT DESCRIPTION

No.	Input key	Function	Display																																				
11	DOWN ◀◀	Turns all FL display lamps OFF. "Disc" and "1~6" are not OFF, because circuit is static operation.																																					
12	EDIT-1	Turns "EDIT-1" letters ON.	EDIT-1																																				
13	EDIT-2	Turn "EDIT-2" letters ON.	EDIT-2																																				
14	FF ▶▶	In the STOP mode, moves the pickup slightly toward the outer position of disc.																																					
15	FB ◀◀	In the STOP mode, moves the pickup slightly toward the inner position of disc.																																					
16	RANDOM* (DP-M6060 only)	Sub-microprocessors's test mode. S-RAM is set display data from Disc-1 to Disc-255	"S-RAM ALL SET" ← move																																				
17	+10	In stop mode, playback P1-disc number double speed when +10 key is pressed. Normal playback is available for pressing EDIT-1 key, all of keys are acceptable in this mode.	EDIT-1 BLINK																																				
18	Numeric key(1-10)	Jumps tracks as shown below. <table border="1"><tr><td>Key</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>Number of tracks</td><td>1</td><td>4</td><td>8</td><td>32</td><td>1000</td></tr><tr><td>Direction</td><td colspan="5">Outer</td></tr><tr><td>Key</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>Number of tracks</td><td>1</td><td>4</td><td>8</td><td>32</td><td>1000</td></tr><tr><td>Direction</td><td colspan="5">Inner</td></tr></table>	Key	1	2	3	4	5	Number of tracks	1	4	8	32	1000	Direction	Outer					Key	6	7	8	9	10	Number of tracks	1	4	8	32	1000	Direction	Inner					
Key	1	2	3	4	5																																		
Number of tracks	1	4	8	32	1000																																		
Direction	Outer																																						
Key	6	7	8	9	10																																		
Number of tracks	1	4	8	32	1000																																		
Direction	Inner																																						

CIRCUIT DESCRIPTION

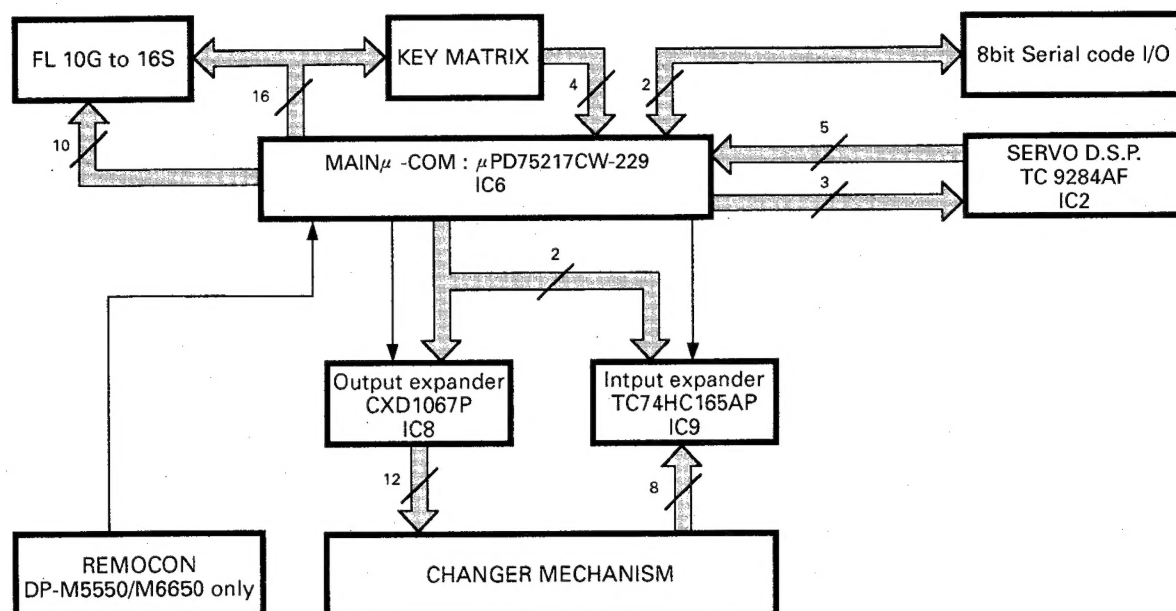
2. Main μ -com : μ PD75217CW-229(IC6)

2-1. Pin connection



CIRCUIT DESCRIPTION

2-2. Block diagram and key matrix



2-3. Pin function: μPD75217CW-229

Pin No.	Pin Name	I/O	Function
1-4	d-a	O	Display segments(key scan control)
5	LOCK	I	LOCK signal sensor from signals processor
6	PCLK	O	Clock output port for CXD1067 and TC74HC165
7	PDATA	O	Data output port for CXD1067
8	PDATA	I	Data input port for TC74HC165
9	RC1	I	Remote control signal input port
10	PHT1	I	Photo interrupter input port for Mechanism up/down
11-16	N.C.	-	Not use
17	SL	O	Latch signal output port for CXD1067
18, 19	N.C.	-	Not use
20	STB	O	STROB signal output port for TC74HC165
21	SDATA	I/O	DATA signal input/output port for System serial communication
22	BUSY	I/O	BUSY signal input/output port for System serial communication
23	CCE	O	CCE control port for TC9236A
24	BUCK	O	Buck control port for TC9236AF

Pin No.	Pin Name	I/O	Function
25~28	BUSO~3	I/O	BUS line control input/output port for TC9236A
29	XLAT	O	Not use
30	X1	I	System Clock input port
31	X2	-	Not use
32	Vss	-	GND
33	XT1	-	GND
34	XT2	-	Open
35~38	KDO-3	I	Return key input of key matrix
39	RESET	I	RESET signal input port
40~49	G1-10	O	Display digit control port
50~55	p~k	O	Display segment control port (key scan)
56	Vload	I	Display drive negative power supply (-35V)
57	Vpre	I	Display predriver negative power supply(-5V)
58~63	j-e	O	Display segments control port (key scan)
64	Vdd	-	Power supply(+5V)

CIRCUIT DESCRIPTION

3. RF Amplifier : TA2031(IC1)

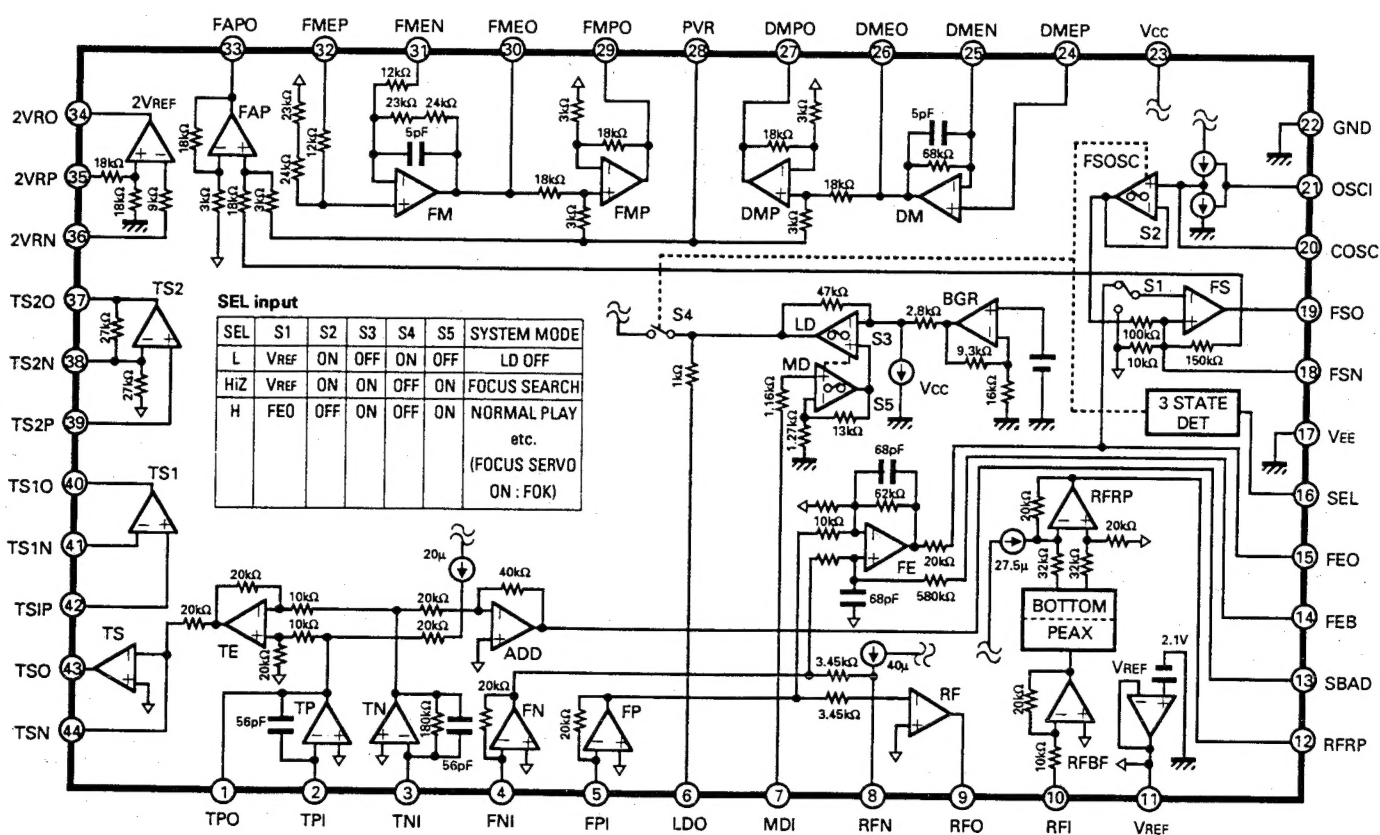
Out line

TA2031 is an LSI for focus tracking servo applicable to PUH of 3 beam type in a CD player system.

Features

- RF amplifier, focus error amplifier, and tracking error amplifier are built in.
- Focus tracking servo amplifier is built in.
- Phase compensation amplifier and LPF amplifier are built in.
- ALPC amplifier is built in.

3-1. Block diagram

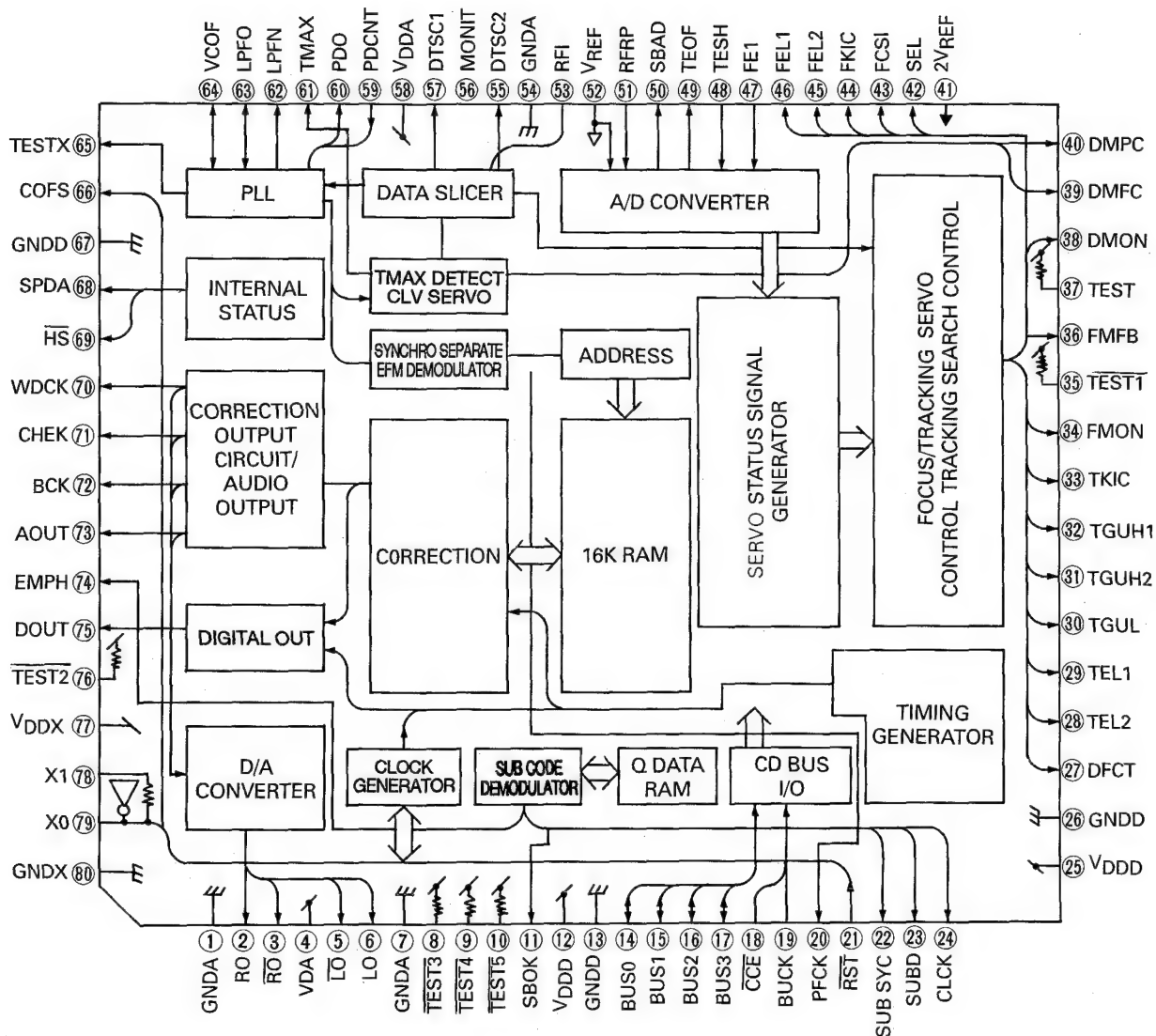


CIRCUIT DESCRIPTION

3-2. Pin fuction

Pin No.	Pin name	I/O	Funtion
1	TOP	O	Sub beam I-V amplifier (TP AMP) output terminal.
2	TPI	I	Sub beam I-V amplifier (TP AMP) input terminal.
3	TNI	I	Sub beam I-V amplifier (TN AMP) input terminal.
4	FNI	I	Main beam I-V amplifier (FN AMP) input terminal.
5	FPI	I	Main beam I-V amplifier (FP AMP) input terminal.
6	LDO	O	Laser diode amplifier (LD AMP) output terminal.
7	MDI	I	Moniten photo diode amplifier (MD AMP) input terminal.
8	RFN	I	RF amplifier (RF AMP) negative phase input terminal.
9	RFO	O	RF amplifier (RF AMP) output terminal.
10	RFI	I	RF ripple signal generating circuit input terminal.
11	VREF	O	Reference voltage output terminal. (+2.1V)
12	RERP	O	RF ripple signal output terminal.
13	SBAD	O	Flaw sensing output terminal.
14	FEB	O	Focus error balance adjustment input terminal.
15	FEO	O	Focus error amplifier (FE AMP) output terminal.
16	SEL	I	Analog switch control signal input terminal.
17	VEE	-	GND
18	FSN	I	Focus output amplifier (FS AMP) negative phase input terminal.
19	FSO	O	Focus output amplifier (FS AMP) output terminal.
20	COSC	O	Focus search signal generating capacitor connection terminal.
21	OSCI	I	Built in current control input terminal for focus search signal generation
22	GND	-	Ground terminal.
23	Vcc	-	Power supply (+5V).
24	DMEF	I	Disc motor amplifier (DM AMP) positive phase input terminal.
25	DMEN	I	Disc motor amplifier (DM AMP) negative phase output terminal.
26	DMEO	O	Disc motor amplifier (DM AMP) output terminal.
27	DMPO	O	Disc motor drive amplifier (DMP AMP) negative phase output terminal.
28	PVR	I	Drive amplifier reference voltage input terminal.
29	FMPO	O	Feed motor drive amplifier (FMP) output terminal.
30	FMEO	O	Feed motor amplifier (FM AMP) output terminal.
31	FMEN	I	Feed motor amplifier (FM AMP) negative phase input terminal.
32	FMEP	I	Feed motor amplifier (FM AMP) positive phase input terminal.
33	FAPO	O	Focus actuator drive amplifier (FAP AMP) output terminal.
34	2VRO	O	2VREF amplifier (2VREF AMP) output terminal.
35	2VRP	I	2VREF amplifier (2VREF AMP) positive phase input terminal.
36	2VRN	I	2VREF amplifier (2VREF AMP) negative phase input terminal.
37	TS2O	O	Tracking servo amplifier 2 (TP2 AMP) output terminal.
38	TS2N	I	Tracking servo amplifier 2 (TP2 AMP) negative phase input terminal.
39	TS2P	I	Tracking servo amplifier 2 (TP2 AMP) positive phase input terminal.
40	TS1O	O	Tracking servo amplifier 1 (TS1 AMP) output terminal.
41	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative phase input terminal.
42	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive phase input terminal.
43	TSO	O	Tracking output amplifier (TS AMP) output terminal.
44	TSN	I	Tracking output amplifier (TS AMP) negative phase input terminal.

CIRCUIT DESCRIPTION



CIRCUIT DESCRIPTION

4-2. Pin function

Pin No.	Pin name	I/O	Function															
1	GNDA	-	Analog ground pin															
2	RO	O	Output pin of R-ch data															
3	/RO	O	Inverted output pin of R-ch data															
4	VDA	-	Power supply for DA converter															
5	/LO	O	Inverted output pin of L-ch data															
6	LO	O	Output pin of L-ch data															
7	GNDA	-	Anglog ground pin															
8-10	/TEST3-5	I	Test pin. Normally "H" or open															
11	SBOK	O	Output pin for CRCC check result of sub-code Q. OK=H															
12	Vddd	-	Power supply for digital circuit (5V)															
13	GNDD	-	Digital ground															
14-17	SUBO-3	I/O	Data input/output pin for microprocessor interface															
18	/CCE	I	Chip enable pin for transmission and receiving of commands and data. Bus line is active at "L"															
19	BUCK	I	Clock input pin for microprocessor I/O															
20	PFCK	O	Frame synchro output pin for playback															
21	/RST	I	Reset signal input pin. RESET="L"															
22	SUBSYN	O	Sub code synchro signal output pin.															
23	SUBD	O	Sub code P-W output pin															
24	CLCK	I	Sub code P-W data reading clock input pin															
25	VDDD	-	Power supply for digital circuit															
26	GNDD	-	digital ground															
27	DFCT	O	Defect sensing signal output pin. Vref=defect detection/normal=Hiz															
28, 29	TEL1, 2	O	Anglog switch ouput pin for tracking gain adjust. Vref or Hiz.															
30	TGUL	O	Anglog switch ouput pin for changeover of tracking servo															
31, 32	TGUH2, 1	O	Anglog switch ouput pin for tracking servo gain amp. Gain-up="Hiz"/Normal="Vref". Normal playback=TGUH1/Dou															
33	TKIC	O	Tracking actuator kick signal output pin. outside=2Vref/Inside=0/normal=Hiz															
34	FMON	O	Analog switch output pin for On and OFF of feed servo. Servo-ON=Hiz/OFF=Vref															
35	/TEST1	I	Reset pin Normally "H" or open.															
36	FMFB	O	Control signal output pin for FWD/BWD feedmotor Outside=2Vref/Inside=0/Normal=Hiz															
37	/TEST	I	Reset pin Normally "H" or open.															
38	DMON	O	Analog switch output pin for changeover of gain of disc motor drive. CLV servo-OFF=Hiz/ON=by command.															
39	DMFC	O	AFC signal output pin for disc motor CLV servo.															
			<table><tr><th>Function</th><th>Command</th><th>DMFC out</th></tr><tr><td>Motor speed-up</td><td>DMFK</td><td>2VREF</td></tr><tr><td>CLV servo on</td><td>DMSV</td><td>PWM</td></tr><tr><td>Motor brake</td><td>DMBK</td><td>L</td></tr><tr><td>CLV servo off</td><td>DMOFF</td><td>VREF</td></tr></table>	Function	Command	DMFC out	Motor speed-up	DMFK	2VREF	CLV servo on	DMSV	PWM	Motor brake	DMBK	L	CLV servo off	DMOFF	VREF
Function	Command	DMFC out																
Motor speed-up	DMFK	2VREF																
CLV servo on	DMSV	PWM																
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CLV servo off	DMOFF	VREF																

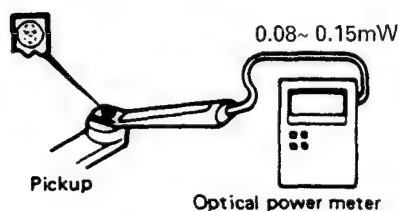
40	DMPC	O	APC signal pin for disc motor CLV servo.																
41	2VRFE	1	Double-reference voltage input pin																
42	SEL	O	Servo mode inde indication signal output pin																
			<table> <tr> <th>Sel.out</th><th>LD</th><th>Focus servo</th><th>Function mode</th></tr> <tr> <td>L</td><td>OFF</td><td>ON</td><td>LD off</td></tr> <tr> <td>Hiz</td><td>ON</td><td>OFF</td><td>Focus search</td></tr> <tr> <td>H</td><td>ON</td><td>ON</td><td>Focus on</td></tr> </table>	Sel.out	LD	Focus servo	Function mode	L	OFF	ON	LD off	Hiz	ON	OFF	Focus search	H	ON	ON	Focus on
Sel.out	LD	Focus servo	Function mode																
L	OFF	ON	LD off																
Hiz	ON	OFF	Focus search																
H	ON	ON	Focus on																
43	FCSI	O	Actuator drive output pin for focus search mode. Vdda=go off from disc/ 0=come near/Hiz=normal																
44	FKIC	O	Actuator drive output pin for focus gain mode. Vdda=go off from disc/ o=come near /Hiz=normal																
45, 46	FEL1, 2	O	Analog switch for focus gain adjust.																
47	FEI	I	Focus error input pin.																
48	TESH	I	Analog switch of sample hold for tracking error.																
49	TEOF	O	Anglog switch of tracking servo. Servo off=Vref.																
50	SBAD	I	Sub-beam adder																
51	RFRP	I	RF ripple signal input pin.																
52	VREF	-	Analog reference voltage pin.																
53	RFI	I	RF input pin.																
54	GNDA	-	Analog ground.																
55	DTSC2	O	Inverted EFM output pin for data slice control.																
56	MONIT	O	Monitor output pin for internal signal.																
57	DTSC1	O	EFM output pin for data slice control.																
58	ADDA	-	Analog power supply.																
59	PDCNT	I	PDO signal control pin. L=Hiz/H=normal.																
60	PDO	O	Phase differetial signal from EFM and PLCK output pin.																
61	TMAX	O	TMAX detection result output pin.																
62	LPFN	I	Inverted input pin for LPF.																
63	LPFO	O	LPF output pin.																
64	VCOF	O	VCO filter pin.																
65	TESTX	I	Test pin.																
66	COFS	O	Error correction frame clock(7.35kHz) output pin.																
67	GNDD	-	Digital ground.																
68	SPDA	O	Processor status signal output pin.																
69	/HS	O	Output pin for double-speed mode. Double="L".																
70	WDCK	O	Word clock(88.2kHz) output pin.																
71	CHCK	O	Channel clock(44.1kHz) output pin. L=L-ch/ H=R-ch																
72	BCK	O	Bit clock(1.4112MHz) out put pin.																
73	AOUT	O	Audio data output pin.																
74	EMPH	O	Emphasis control signal output pin.																
75	DOUT	O	Digital output pin.																
76	/TEST2	I	Test pin.																
77	VDDX	-	Power supply for internal oscillation.																
78	XI	I	Crystal oscillation(16.9344MHz)																
79	XO	O	Crystal oscillation(16.9344MHz)																
80	GNDX	-	Crystal oscillation ground																

ADJUSTMENT

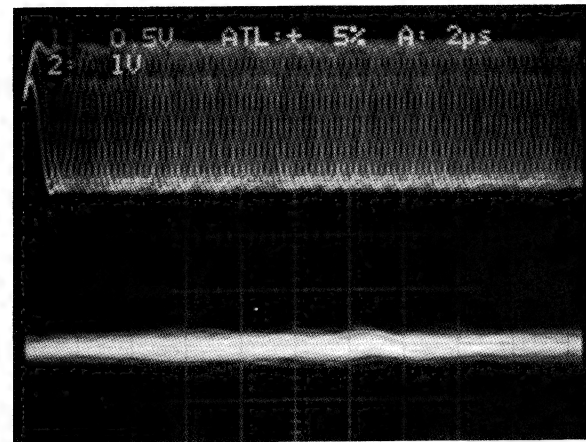
No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG.
1	LASER POWER	-	Apply the sensor section of optical power meter on the pickup lens.	Short-circuit pine Test and turn the power on to enter the test mode. Press the MANUAL S. key(▶▶) to move the pickup outwards. Press the REPEAT key to check the LD emits light. Then confirm that the display is "D2"	-	On the power from 0.08 to 0.15mW. When the diffraction grating is correctly aligned with the RF level of 1.0Vp-p or more and the TE (servo open) level of 0.5Vp-p or more, the pickup is acceptable.	(a)
2	TRACKING ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF(CN5-1) CH2 : TE(CN5-6) GND : Vref(2.1V)	Turn power switch off and set the unit to test mode. Set the test disc to the 3rd position in the magazine pack. Press the 3rd key of the disc selector and load the test disc. Press the CHECK key. Then confirm that the display is "03"	TE BALANCE VR2	Symmetry between upper and lower patterns or DC=Vref \pm 0.05V	(b)
3	POCUS ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : FEO(Pin5) GND : Vref(2.1V))	STOP	FE BALANCE VR1	DC=Vref \pm 0.05V	(c)

(Note) Type 4 disc : SONY YDS-18 Test Disc or equivalent.
Step 1~3 are in Test Mode.

(a) Laser Power



ADJUSTMENT



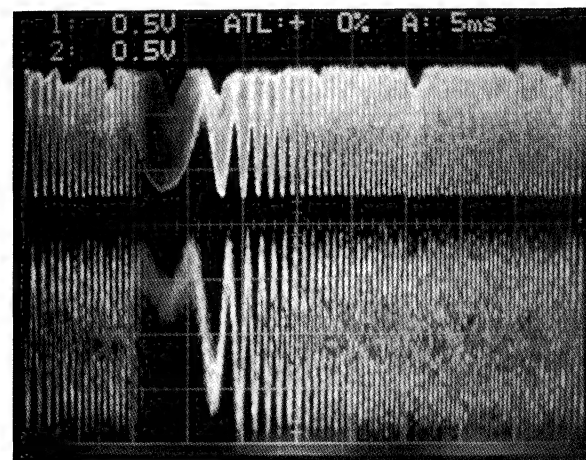
CH1
RF signal

← Vref2.1(V)

← Vref2.1(V)

CH2
TE signal

13μs

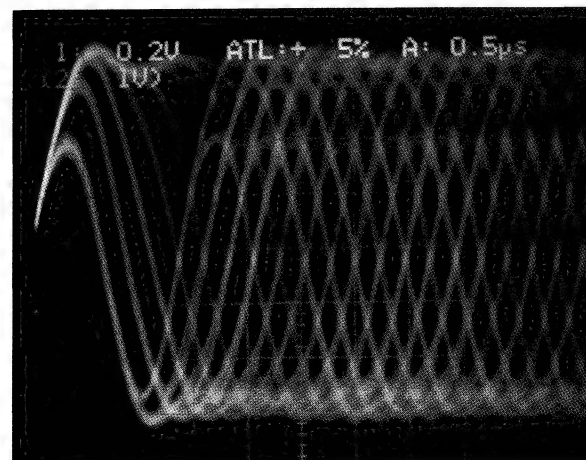


CH1
RF signal

← Vref2.1(V)

← Vref2.1(V)

CH2
TE signal



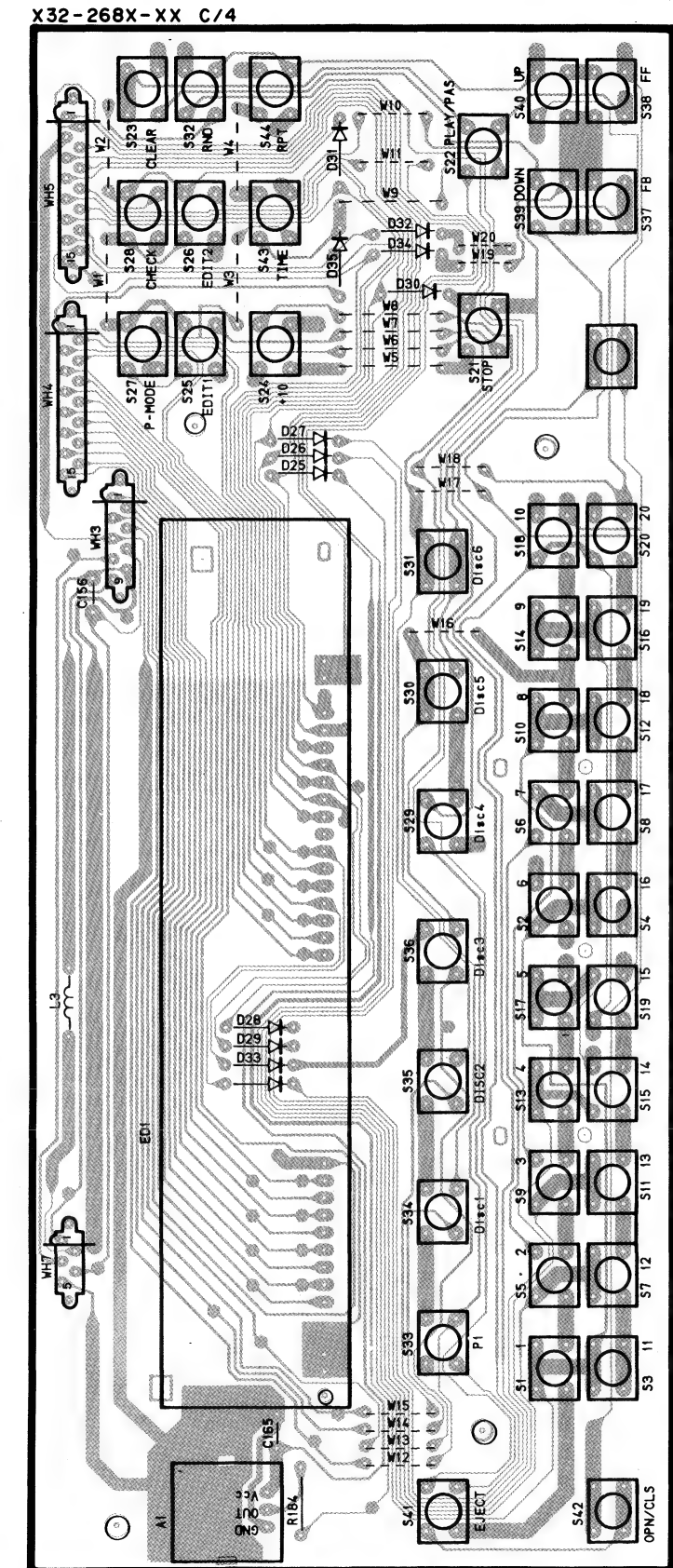
RF signal

- RF signal and TE signal in test mode(PLAY).
- If the diffraction grating has been adjusted properly, the influence of triggering is observed on the TE wave form of approx. 13 μs after RF signal, in the form of a projection.

- RF signal and TE signal in test mode(Focusing servo ON, CHECK).
- Adjust TE signal so that the wave form is symmetrical above and below OV (TE BALANCE, VR2).

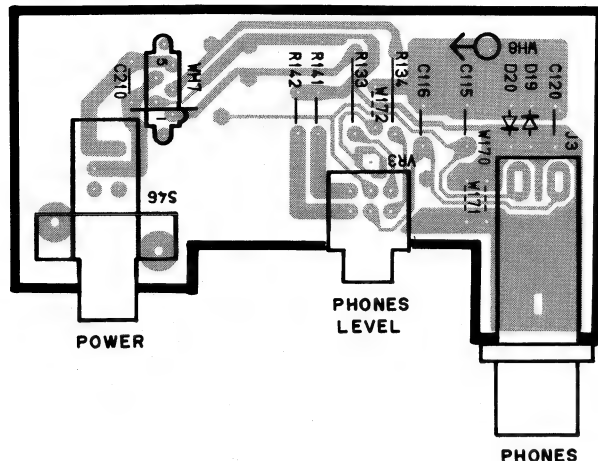
- RF signal in test mode(PLAY).
- UPerform the focusing offset adjustments so that each of the center cross points are focusing into one points above and below the center shall also displayed clearly(FE BALANCE, VR1).

PC BOARD (COMPONENT SIDE VIEW)

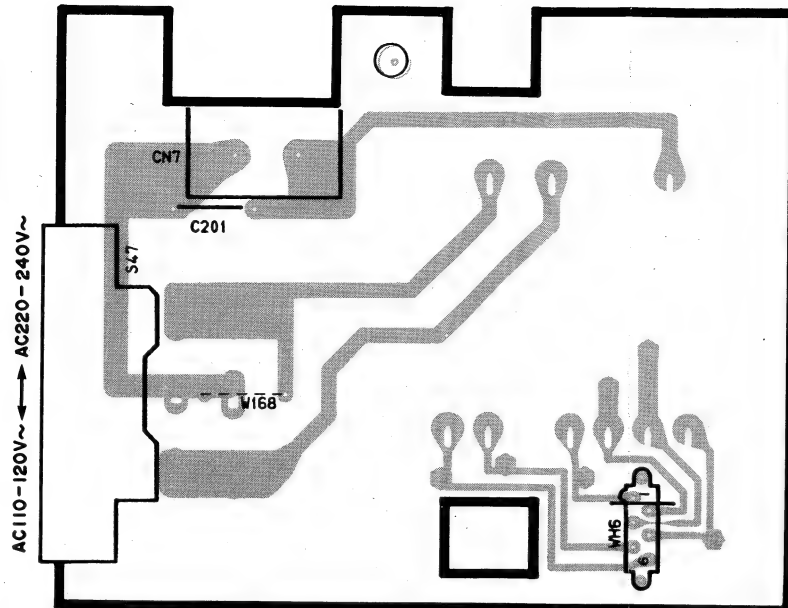


PC BOARD (COMPONENT SIDE VIEW)

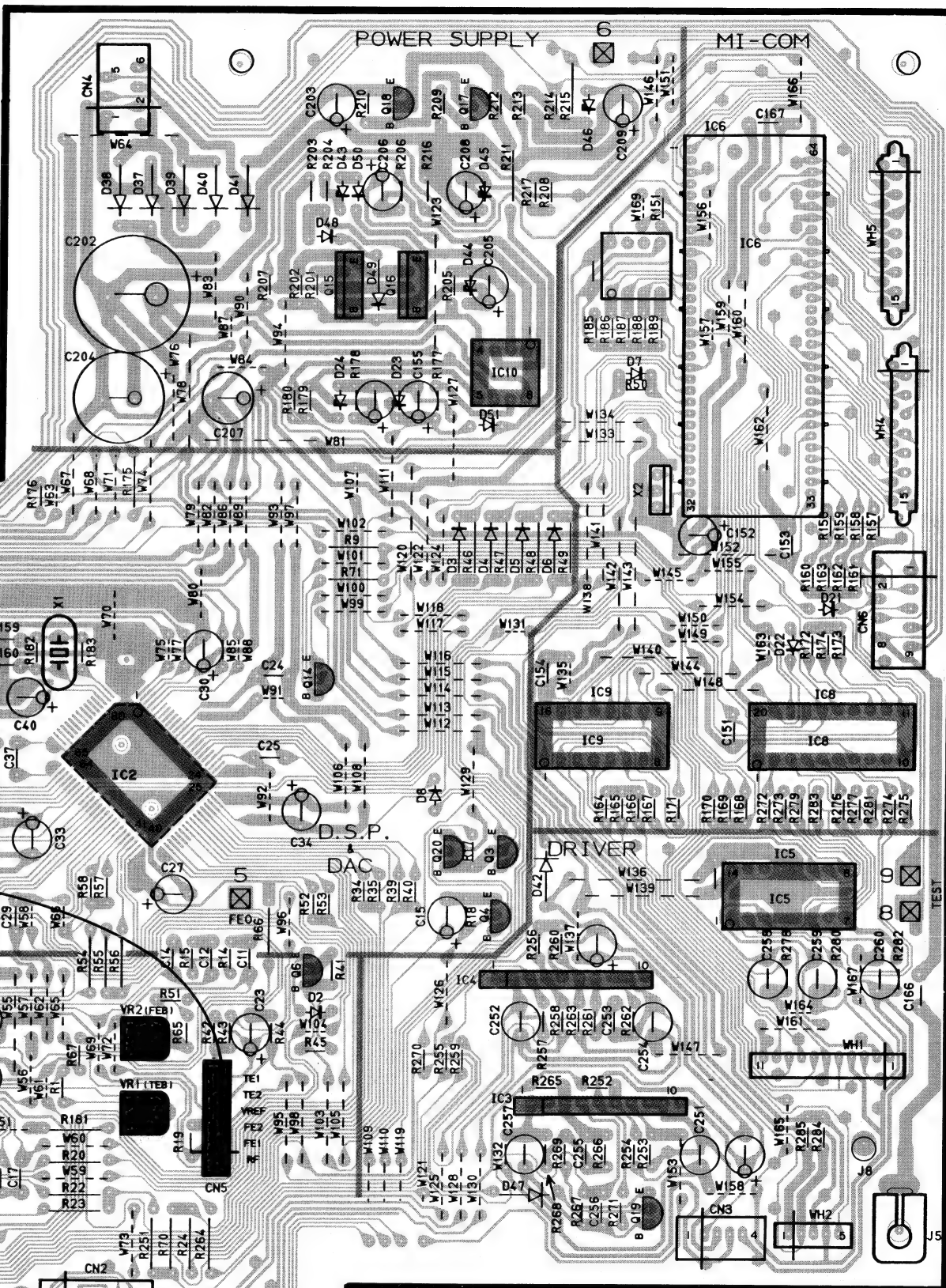
X32-268X-XX B/4



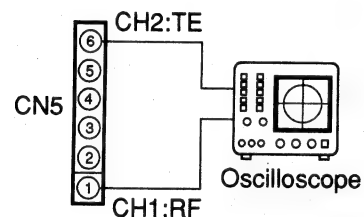
X32- D/4



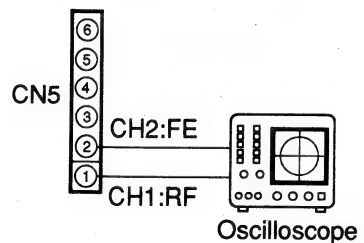
X32- A/4



(b) Tracking error balance :
Symmetry between
upper and lower patterns, or
 $DC = V_{ref}(2.1V)0 \pm 0.05V$

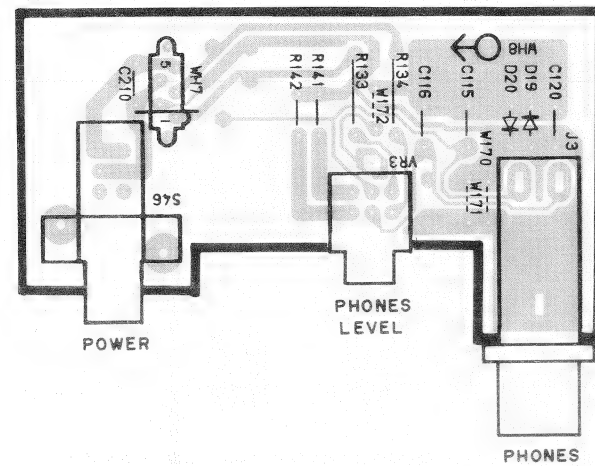


(c) Focus error balance :
Optimum eyepattern

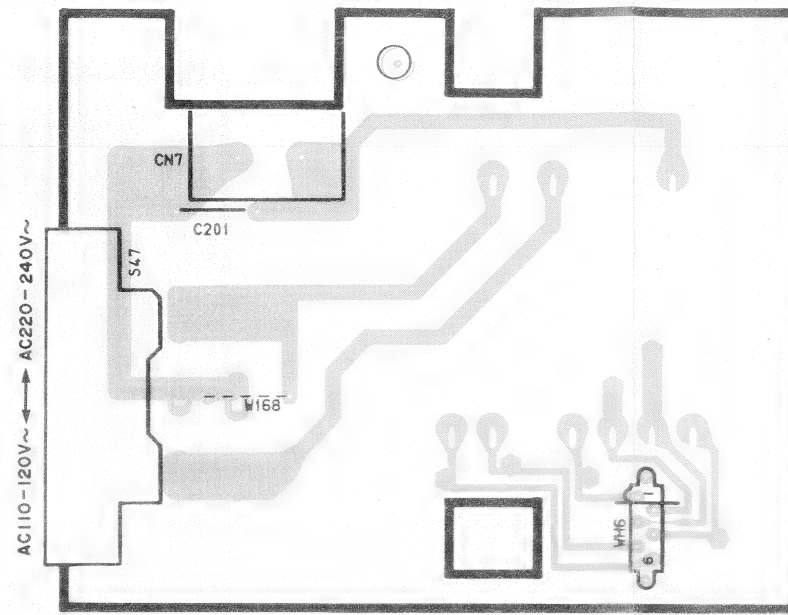


PC BOARD (COMPONENT SIDE VIEW)

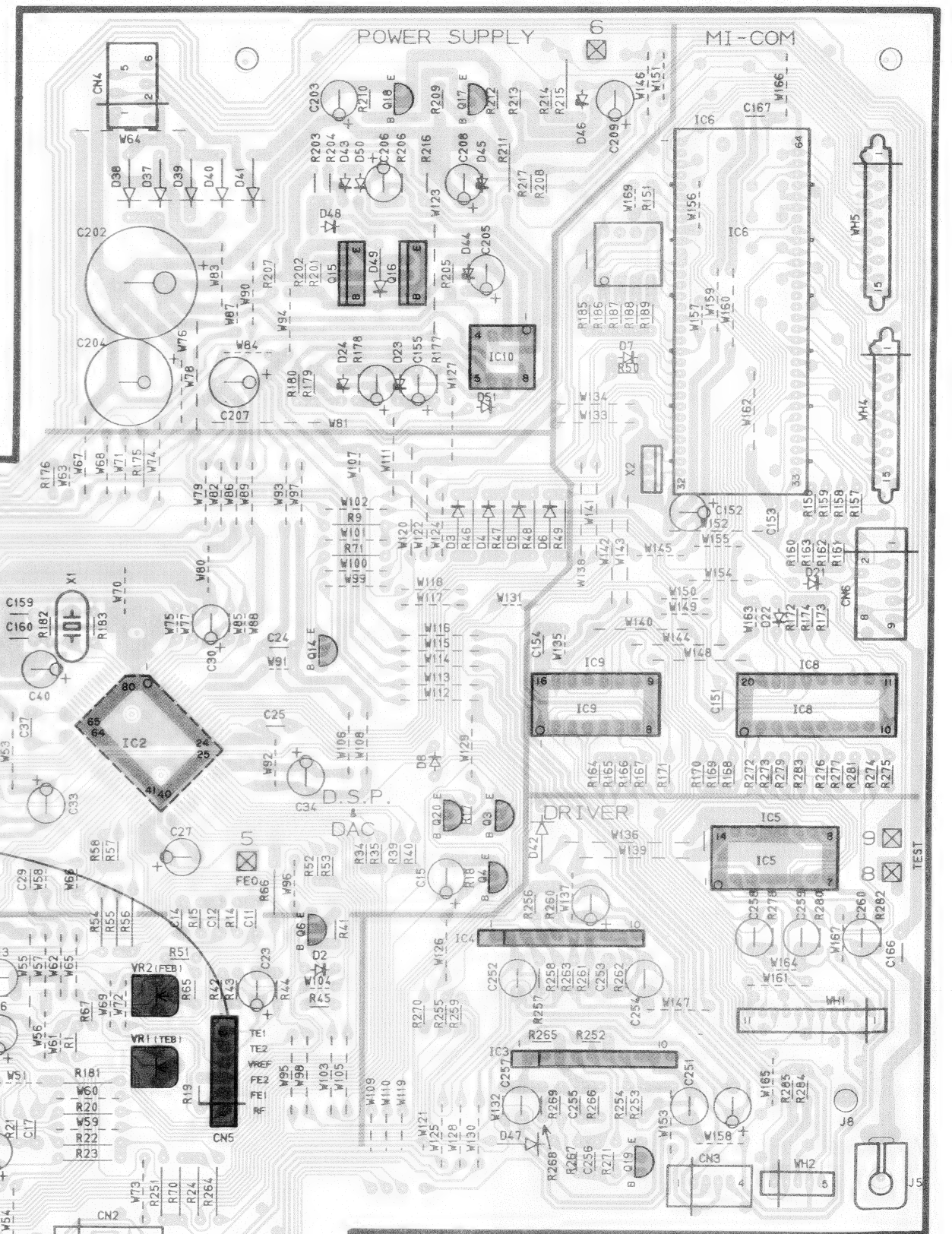
X32-268X-XX B/4



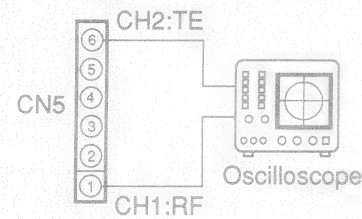
X32- D/4



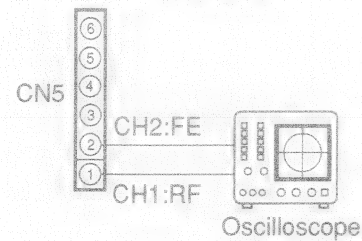
X32- A/4



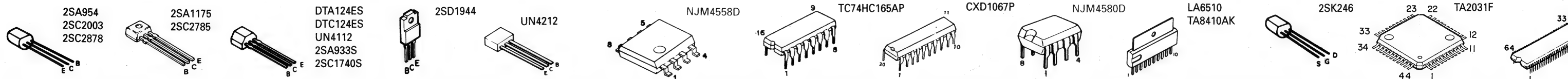
(b) Tracking error balance :
Symmetry between
upper and lower patterns, or
 $DC = V_{ref}(2.1V)0 \pm 0.05V$

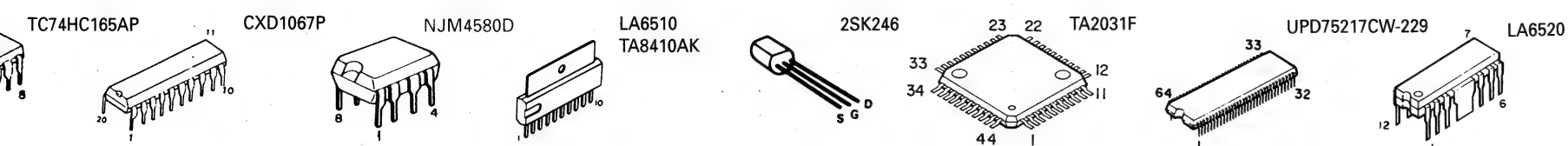
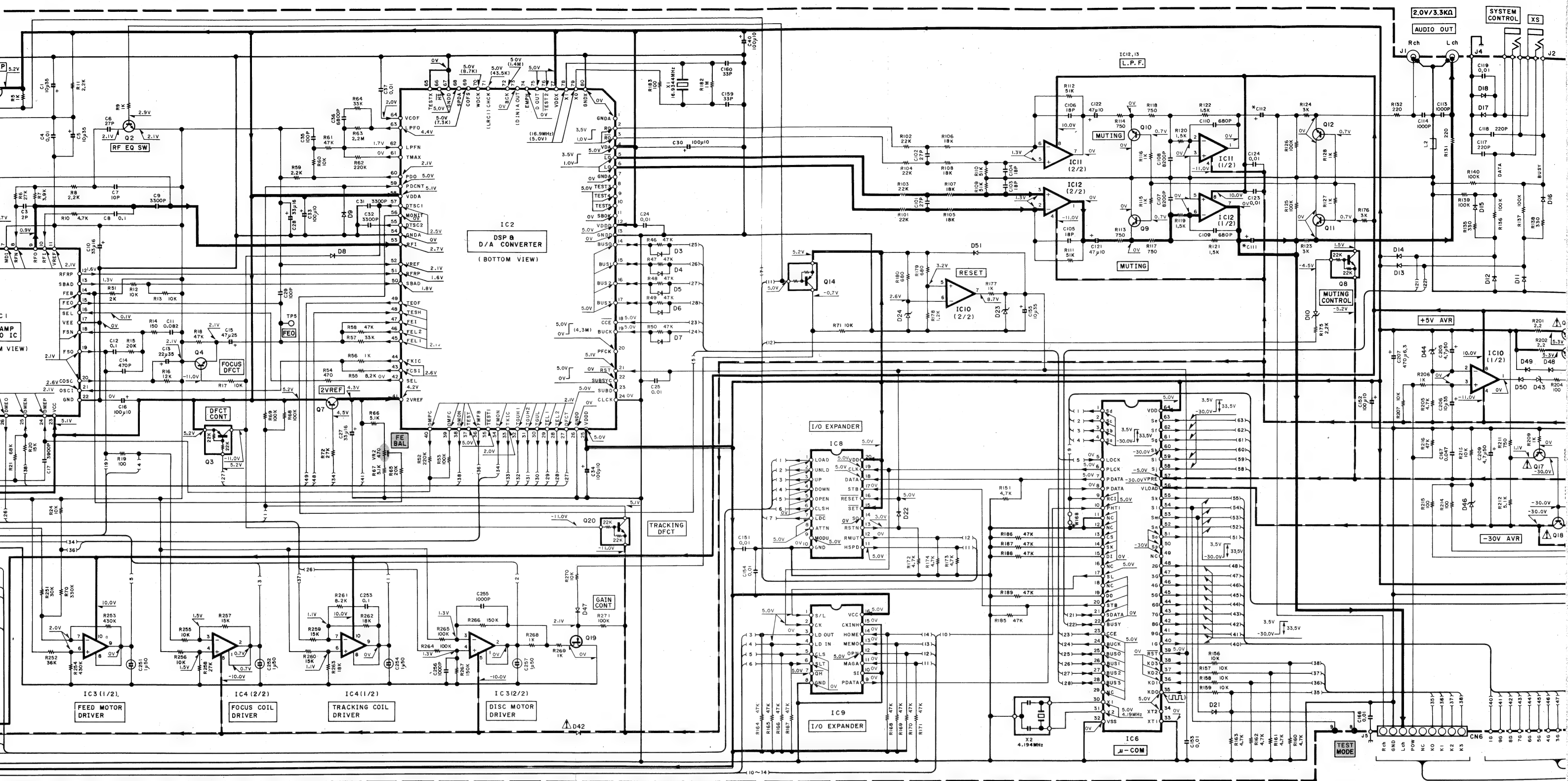


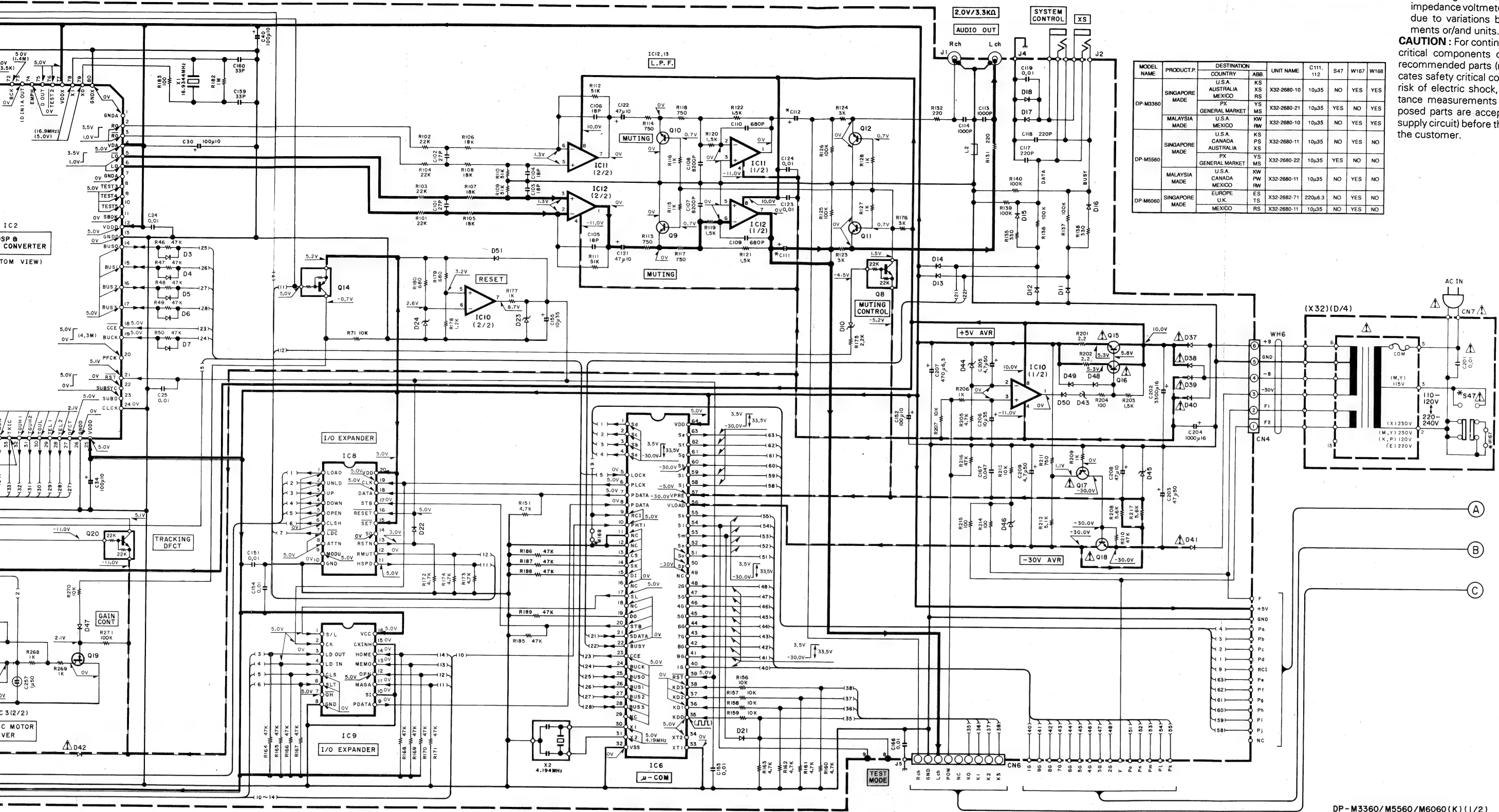
(c) Focus error balance :
Optimum eyepattern



J70-0535-11

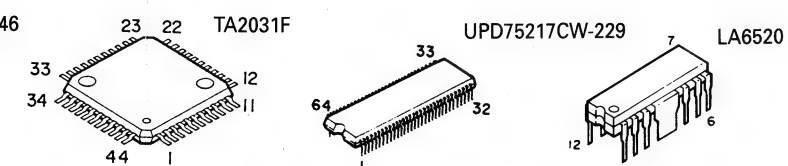


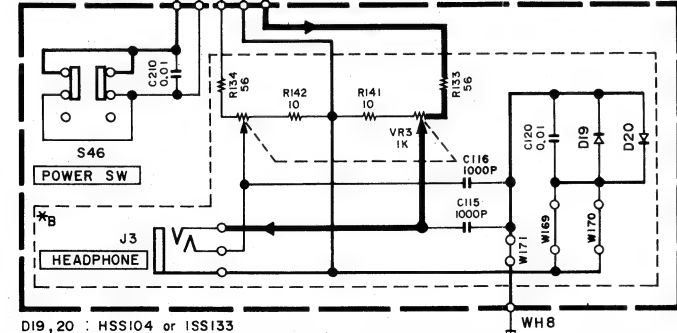




- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



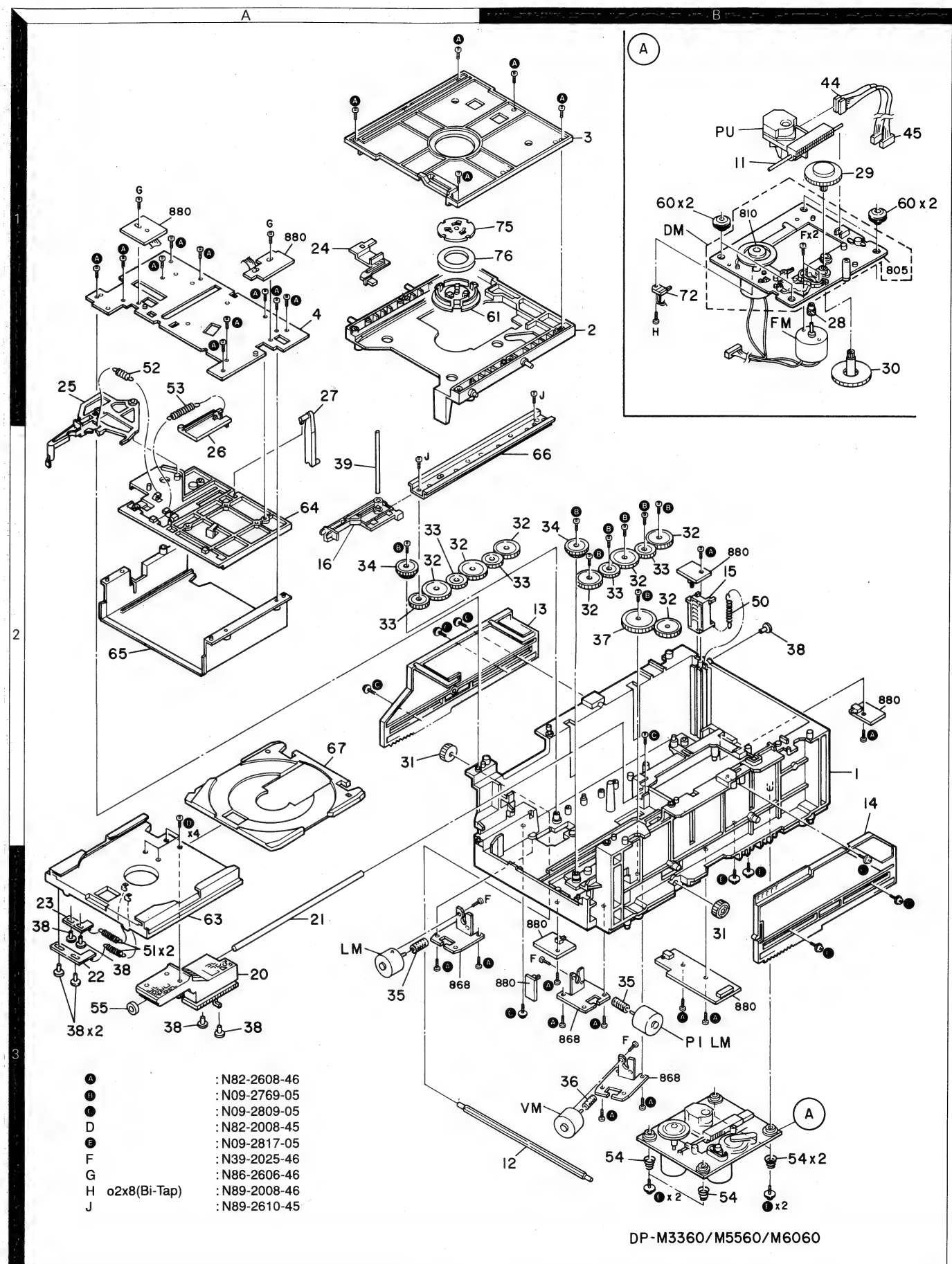


DI9, 20 : HSSI04 or ISSI33

MODEL NAME	PRODUCT.P	DESTINATION		UNIT NAME	A	B	
		COUNTRY	ABB.				
DP-M3360	SINGAPORE MADE	U.S.A.	KS	X32-2680-10	NO	NO	
		AUSTRALIA	XS				
		FX	RS				
		GENERAL MARKET	MS	X32-2680-21	NO	NO	
DP-M5560	MALAYSIA MADE	U.S.A.	KW	X32-2680-10	NO	NO	
		MEXICO	RW				
	SINGAPORE MADE	U.S.A.	KS	X32-2680-11	YES	NO	
			CANADA				PS
			AUSTRALIA				XS
		FX	YS	X32-2680-22	YES	NO	
		GENERAL MARKET	MS				
	MALAYSIA MADE	U.S.A.	KW	X32-2680-11	YES	NO	
		CANADA	RW				
		MEXICO	PW				
DP-M6060	SINGAPORE MADE	EUROPE	ES	X32-2682-71	YES	YES	
		U.K.	TS				
			MEXICO	RS	X32-2680-11	YES	NO

DP-M3360/M5560/M6060
KENWOOD

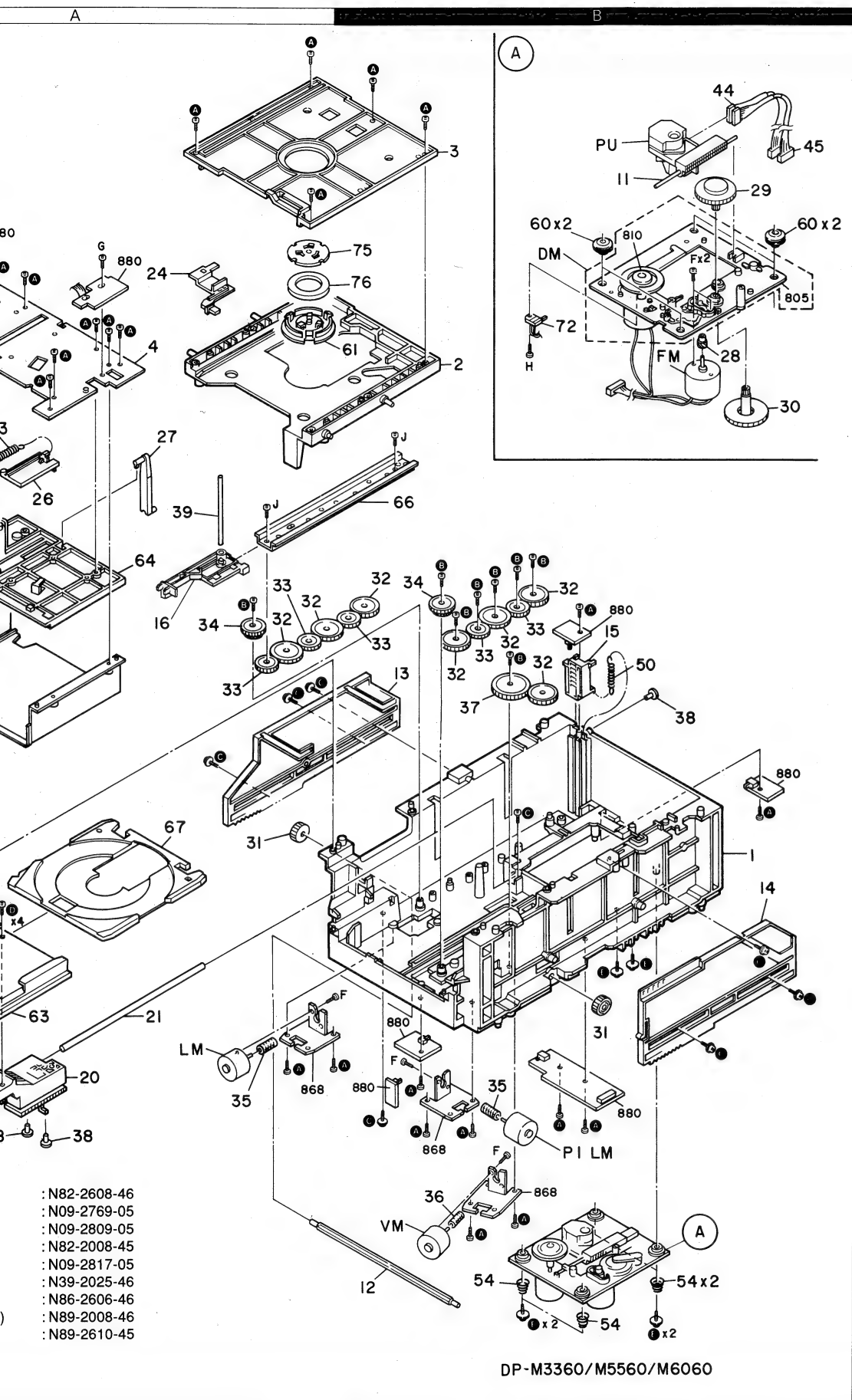
EXPLODED VIEW(MECHANISM)



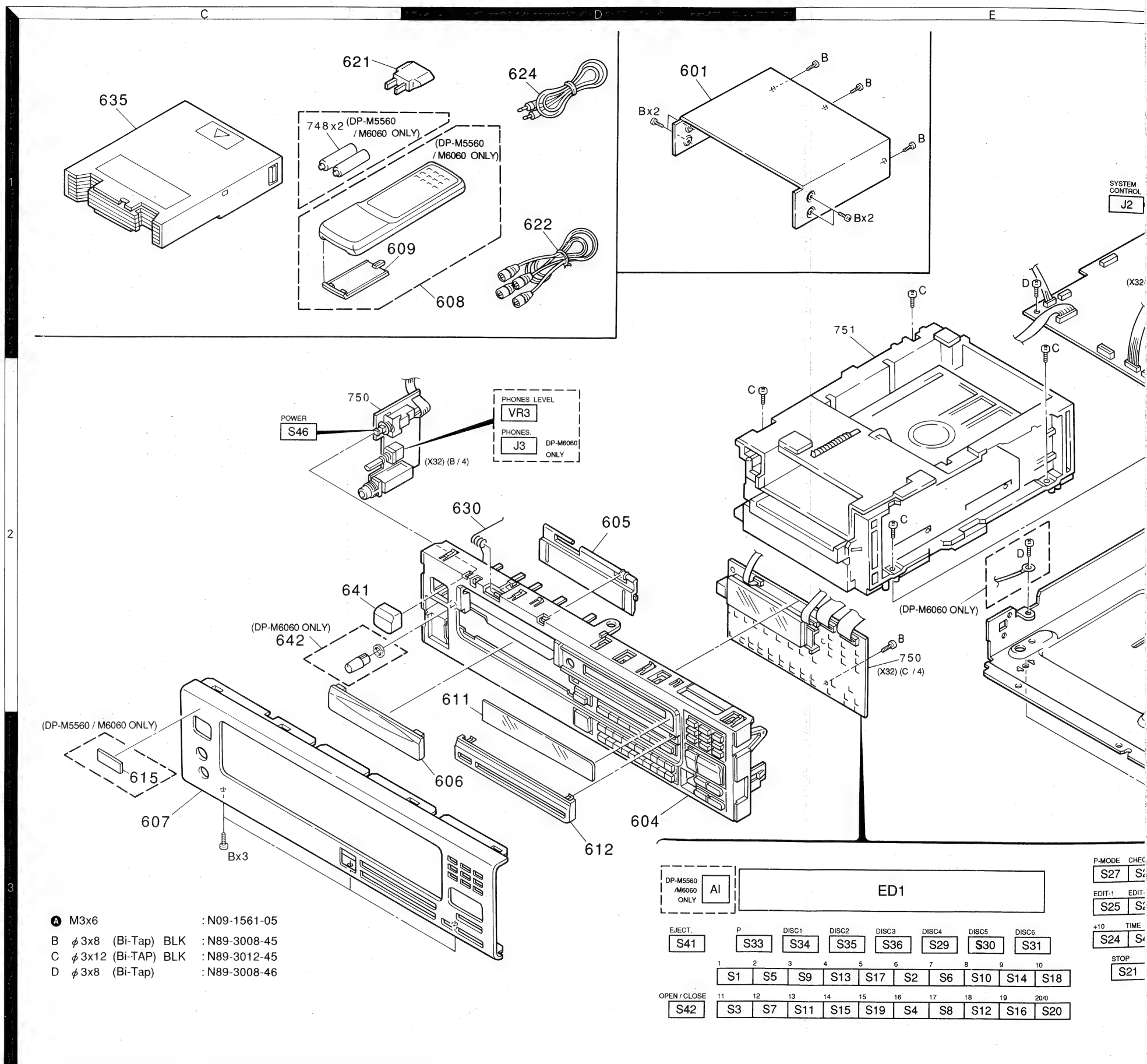
DP-M3360/M5560/M6060

Parts with the exploded numbers larger than 700 are not supplied

EXPLODED VIEW(MECHANISM)



EXPLODED VIEW(UNIT)



45

60 x 2

80.5

-30



supplied

PARTS LIST

* New Parts
Parts without Part
Les articles no
Teile ohne Par

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnés dans le **Parts**
Teil ohne **Parts No.** werden nicht geliefert.

2

Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Telle ofne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 规格	Desti- nation 仕 向	Re- marks 備考
-	*	H10-5716-12	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H10-5716-12	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H10-5717-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H10-5718-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H10-5719-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H10-5720-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE	S
-	*	H13-0141-04	CARTON BOARD	KPYMXE	S
-	*	H20-0567-04	PROTECTION COVER	KPYMXE	S
-	*	H25-0232-04	PROTECTION BAG (235X350X0.03)	KPYMXE	S
-	*	H25-0319-04	PROTECTION BAG	KPYMXE	S
-	*	H25-0651-04	PROTECTION BAG	KPYMXE	S
-	*	H25-0657-04	PROTECTION BAG	KPYMXE	S
-	*	H50-0977-04	ITEM CARTON CASE(SINGAPORE)	KPYMXE	S
-	*	H50-0978-04	ITEM CARTON CASE(SINGAPORE)	KPYMXE	S
-	*	H50-0979-04	ITEM CARTON CASE(MALAYSIA)	KPYMXE	S
-	*	H50-0980-04	ITEM CARTON CASE	KPYMXE	S
-	*	H50-0981-04	ITEM CARTON CASE	KPYMXE	S
-	*	H50-0982-04	ITEM CARTON CASE	KPYMXE	S
-	*	H50-0982-04	ITEM CARTON CASE(SINGAPORE)	KPYMXE	S
-	*	H50-0983-04	ITEM CARTON CASE(SINGAPORE)	KPYMXE	S
-	*	H50-0984-04	ITEM CARTON CASE(MALAYSIA)	KPYMXE	S
631	3P	J02-0368-05	FOOT (FRONT/REAR)	KPYMXE	3
631	3P	J02-1013-05	FOOT (REAR)	KPYMXE	3
631	3P	J02-1013-05	FOOT (REAR)	KPYMXE	3
631	3P	J02-1024-05	FOOT (FRONT)	KPYMXE	3
631	3P	J02-1024-05	FOOT (FRONT)	KPYMXE	3
631	3P	J02-1034-05	FOOT (FRONT/REAR)	KPYMXE	3
631	3P	J02-1034-05	FOOT (FRONT/REAR)	KPYMXE	3
635	1C	J19-3578-03	HOLDER ASSY (CON-600)	KPYMXE	5
636	1P	J42-0083-05	POWER CORD BUSHING	KPYMXE	5
-	-	J61-0307-05	WIRE BAND	KPYMXE	5
641	2C	K27-2095-04	KNOB (BUTTON) POWER	KPYMXE	6
642	2C	K29-3928-04	KNOB (PHONES)	KPYMXE	6
643	2F	L07-0293-05	POWER TRANSFORMER	KPYMXE	6
643	2F	L07-0294-05	POWER TRANSFORMER	KPYMXE	6
643	2F	L07-0295-05	POWER TRANSFORMER	KPYMXE	6
MECHANISM PCB (K25-4280-21)					
S1-3		S40-1140-05	PUSH SWITCH	KPYMXE	
S4-7		S40-1139-05	PUSH SWITCH	KPYMXE	
PH1		T95-0123-05	8P70 ISO-LATCH	KPYMXE	
CONTROL (K32-2680-11)					
C1, 2		CE04LM1V100M	ELECTR0	KPYMXE	
C3		CC45FSLH020C	CERAMIC	KPYMXE	
C4		CK45FTH103Z	CERAMIC	KPYMXE	
C5		CE04LM1V100M	ELECTR0	KPYMXE	
C6		CC45FSLH270J	CERAMIC	KPYMXE	
C7		CC45FSLH100D	CERAMIC	KPYMXE	
C8		CF92FV1H104J	MF	KPYMXE	
C9		CF92FV1H332J	MF	KPYMXE	
C10		CE04LM1C330M	ELECTR0	KPYMXE	
C11		CF92FV1H823J	MF	KPYMXE	
C12		CF92FV1H104J	MF	KPYMXE	

Country	3DP-M3360	P-Canada	KUSA	L-Scandinavia	Y-PAC(Far East, Hawaii)	Y-AFES(Europe)	T-England	5DP-M5560	E-Europe	Y-Australia	McOther Areas	6DP-M6060	W-Malaysia made	S-Singapore made
USA														
Canada														
UK														
Scandinavia														
Far East														
Europe														
Australia														
Other Areas														
Malaysia														
Singapore														

△ indicates safety critical components.

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Ref. No. 参照番号		Address 位置	New Parts 新部品	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向備考
DP-M3360/M5560/M6060						
601	1D			A01-3028-11	METALLIC CABINET	
604	3D			A22-1617-11	SUB PANEL	
605	3D			A29-0334-03	PANEL (MAGAZINE)	
606	3D			A29-0335-03	PANEL (SINGLE)	
607	3C	*		A60-0548-02	PANEL (FRONT)	ET 6
607	3C	*		A60-0549-02	PANEL (FRONT)	KPYMX 5
607	3C	*		A60-0549-02	PANEL (FRONT)	ETR 3
607	3C	*		A60-0550-02	PANEL (FRONT)	6
608	1D	*		A70-0977-05	REMOTE CONTROLLER ASSY	6
608	1D	*		A70-0977-05	REMOTE CONTROLLER ASSY	6
609	1C			A09-0170-08	BATTERY COVER	6
609	1C			A09-0170-08	BATTERY COVER	6
611	2D			B03-2826-04	DRESSING PLATE	5
611	2D			B03-2826-04	DRESSING PLATE	6
611	2D			B03-2827-04	DRESSING PLATE	6
612	3D			B10-0972-04	FRONT GLASS	3
615	3C			B43-0300-14	KENWOOD BADGE	6
615	3C			B43-0300-14	KENWOOD BADGE	6
-				B46-0092-33	WARRANTY CARD	K
-				B46-0094-03	WARRANTY CARD	V
-				B46-0094-03	WARRANTY CARD	V
-				B46-0095-03	WARRANTY CARD	X
-		*		B46-0096-43	WARRANTY CARD	X
-				B46-0121-33	WARRANTY CARD	P
-				B46-0197-00	QUESTIONNAIRE CARD	KP
-				B46-0310-03	WARRANTY CARD	ET
-				B58-0513-04	CAUTION CARD (PRESET220-240)	Y
-				B58-0513-04	CAUTION CARD	T
-		*		B58-0961-04	CAUTION CARD	T
-		*		B58-0964-03	CAUTION CARD (UL)	KYR
-		*		B58-0965-03	CAUTION CARD (PL)	PXT
-		*		B58-0966-03	CAUTION CARD (PL)	ME
-		*		B58-0970-03	CAUTION CARD (PL)	R
-		*		B60-1525-00	INSTRUCTION MANUAL (ENGLISH)	ET 6
-		*		B60-1526-00	INSTRUCTION MANUAL (G/D/I)	6
-		*		B60-1527-00	INSTRUCTION MANUAL (FRE/SPA)	E
-		*		B60-1528-00	INSTRUCTION MANUAL (ENGLISH)	B
-		*		B60-1529-00	INSTRUCTION MANUAL (FRENCH)	KPYMXR 6
-		*		B60-1530-00	INSTRUCTION MANUAL (SPANISH)	P
-		*		B60-1531-00	INSTRUCTION MANUAL (CHINESE)	MR
-		*		B60-1531-00	INSTRUCTION MANUAL (CHINESE)	M
621	1C			E03-0115-05	AC PLUG ADAPTER	M
622	1D			E30-0505-05	AUDIO CORD	ME
623	1F			E30-2593-15	AC POWER CORD	V
623	1F			E30-2605-05	AC POWER CORD	KPR
623	1F			E30-2650-05	AC POWER CORD	X
623	1F			E30-2717-05	AC POWER CORD	T
623	1F			E30-2721-05	AC POWER CORD	
624	1D			E30-2733-05	CORD WITH PLUG	
630	2D			G09-0420-14	SPRING	
-				G11-0155-14	SOFT TAPE (40X9X2)	
-				H10-5715-02	POLYSTYRENE FOAMED FIXTURE	KPYMXE 5
-				H10-5715-02	POLYSTYRENE FOAMED FIXTURE	R

Country	Region	Model	Manufacturer
L.Sandhavia	KUSA	3DP-M3360	S.Singapore made
Y2X(Far East, Hawaii)	T:England	5DP-M5560	W.Malaysia made
YAA(FE:Europe)	Y:Australia	6DP-M6060	
	MI:Other Areas		

A indicates safety critical components

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Ref. No. 参照番号	Address 位置	New Parts 部品番号	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C253			CF92FV1H104J	MF		
C254			CE04HW1H010M	NP-ELEC		
C255, 256			CK45FS1H102K	CERAMIC		
C257			CE04HW1H010M	NP-ELEC		
C258			CE04HW1E100M	NP-ELEC		
C259			CE04HW1H010M	NP-ELEC		
C260			CE04HW1A470M	NP-ELEC		
J1	1F		E63-0076-05	PHONE JACK		
J2	1E		E11-0188-05	MINIATURE PHONE JACK (2P)		
J3	2D		E11-0190-05	PHONE JACK		
J4		*	F10-0816-04	SHIELDING PLATE		
J6 - 8			J19-3579-04	HOLDER		
			J11-0098-05	WIRE CLAMPER		
L1			L40-1001-17	SMALL FIXED INDUCTOR (100H, K)		
L2			L92-0017-05	FERRITE CORE		
L3			L92-0017-05	FERRITE CORE		
X1			L77-1164-05	CRYSTAL RESONATOR (16.9344MHZ)		
X2			L78-0267-05	RESONATOR (4.194MHZ)		
VR1			R12-3652-05	TRIMMING POT. (220K)		
VR2			R12-3607-05	TRIMMING POT. (470)		
VR3			R10-1005-05	POTENTIOMETER (1K) PHONES		
S1 - 44			S40-1064-05	PUSH SWITCH		
S46			S40-2370-05	PUSH SWITCH		
S47			S31-2131-05	SLIDE SWITCH (POWER TYPE)		
D1 - 9			HSS104	DIODE		
D10			ISS133	DIODE		
D11			HZ55-6N(B2)	ZENER DIODE		
D11 - 18			RD5.65S(B2)	ZENER DIODE		
D11 - 18			HSS104	DIODE		
D11 - 18			ISS133	DIODE		
D19 - 20			HSS104	DIODE		
D19 - 20			ISS133	DIODE		
D21 - 22			HSS104	DIODE		
D21 - 22			ISS133	DIODE		
D23			HZ55-1S(B2)	ZENER DIODE		
D24			RD5.1JS(B2)	ZENER DIODE		
D24			HZ52.7N(B2)	ZENER DIODE		
D25 - 35			RD2.7ES(B2)	ZENER DIODE		
D25 - 35			HSS104	DIODE		
D25 - 35			ISS133	DIODE		
D37 - 42			S5688B	DIODE		
D37 - 42			ISS139-100	DIODE		
D43 - 45			HZ55-1S(B2)	ZENER DIODE		
D43 - 45			RD5.1JS(B2)	ZENER DIODE		
D46			HZ56-8N(B2)	ZENER DIODE		
D46			RD6.8ES(B2)	ZENER DIODE		
D47 - 51			HSS104	DIODE		
D47 - 51			ISS133	DIODE		
ED1			FIP9CXM7	INDICATOR TUBE		
IC1			TA2031F	IC (CD FOCUS, TRACKING SERV)		
IC2			TC9284AF	MOS-IC		
IC3, 4			LA6510	IC (DUAL POWER OP AMP)		

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Ref. No. 参照番号	Address 位置	New Parts 部品番号	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C13			CE04LW1V220M	ELECTR0		
C14			CK45FB1H471K	CERAMIC		
C15			CE04LW1E470M	ELECTR0		
C16			CE04LW1A101M	ELECTR0		
C17			CF92FV1H392J	MF		
C18			CE04LW1A101M	ELECTR0		
C19			CE04LW1H2R2M	ELECTR0		
C20			CF92FV1H333J	MF		
C21			CF92FV1H223J	MF		
C22			CC45FSL1H680J	CERAMIC		
C23			CE04LW1V100M	ELECTR0		
C24, 25			CK45FF1H103Z	CERAMIC		
C27, 28			CE04LW1C330M	ELECTR0		
C29			CE04FSL1H101J	CERAMIC		
C30			CE04LW1A101M	ELECTR0		
C31, 32			CF92FV1H322J	MF		
C33, 34			CE04LW1A101M	ELECTR0		
C35			CK45FSL1H101J	CERAMIC		
C36			CF92FV1H682J	MF		
C37			CK45FF1H103Z	CERAMIC		
C40			CE04LW1A101M	ELECTR0		
C101, 102			CK45FSL1H270J	CERAMIC		
C103, 106			CK45FSL1H60J	CERAMIC		
C107, 108			CF92FV1H822J	MF		
C109, 110			CF92FV1H681J	MF		
C111, 112			CE04LW0J221M	ELECTR0		
C113, 114			CE04LW1V100M	ELECTR0		
C115, 116			CK45FB1H102K	CERAMIC		
C117, 118			CC45FSL1H221J	CERAMIC		
C119			CK45FF1H103Z	CERAMIC		
C120			CK45FF1H103Z	CERAMIC		
C121, 122			CE04LW1A470M	ELECTR0		
C123, 124			CK45FF1H103Z	CERAMIC		
C151			CK45FF1H103Z	CERAMIC		
C132			CE04LW1A101M	ELECTR0		
C153, 154			CK45FF1H103Z	CERAMIC		
C155			CE04LW1V100M	ELECTR0		
C156			CK45FF1H103Z	CERAMIC		
C159, 160			CC45FSL1H330J	CERAMIC		
C165			CK45FF1H103Z	CERAMIC		
C166			CK45FF1H103Z	CERAMIC		
C167			CK45FF1H473Z	CERAMIC		
C201			C91-0647-05	AC250V		
C202			CE04LW1C332M	ELECTR0		
C203			CE04LW1H470M	ELECTR0		
C204			CE04LW1C102M	ELECTR0		
C205			CE04LW1H470M	ELECTR0		
C206			CE04LW1V100M	ELECTR0		
C207			CE04LW0J471M	ELECTR0		
C208			CE04LW1A470M	ELECTR0		
C209			CE04LW1H470M	ELECTR0		
C210			CK45FF1H103Z	CERAMIC		
C251, 252			CE04LW1H010M	NP-ELEC		

S: Singapore made
W: Malaysia made
A indicates safety critical components.

3DP-M3360
5DP-M5560
6DP-M6060

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3DP-M3360
5DP-M5560
6DP-M6060

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PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
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Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
31	2A, 3B	D13-0897-04	GEAR		
32	2A, 2B	D13-0898-24	GEAR		
33	2A, 2B	D13-0899-24	GEAR		
34	2A, 2B	D13-0900-14	GEAR		
35	3A, 3B	D13-0901-14	WORM		
36	3B	D13-0902-14	WORM		
37	2B	D13-0904-14	GEAR		
38	2B, 3A	D21-1633-05	SHAFT		
39	2A	D21-1634-04	SHAFT		
44	1B	E35-0865-05	WIRING HARNESS		
45	1B	E35-0866-05	WIRING HARNESS		
50	2B	G01-3332-04	EXTENSION SPRING		
51	3A	G01-3317-04	EXTENSION SPRING		
52	1A	G01-3334-04	EXTENSION SPRING		
53	1A	G01-3335-04	EXTENSION SPRING		
54	3B	G01-3336-04	COMPRESSION SPRING		
55	3A	G11-2055-04	CUSHION		
60	1B	J02-1057-15	INSULATOR		
61	1B	J11-0168-03	CLAMPER		
63	3A	J19-3345-02	HOLDER		
64	2A	J19-3347-02	HOLDER		
65	2A	J19-3348-02	HOLDER		
66	2B	J90-0666-04	GUIDE		
67	2A	J99-0094-12	TRAY		
72	1B	S33-1022-05	LEVER SWITCH		
75	1B	T50-1055-04	YOK		
76	1B	T99-0503-15	MAGNET		
DM	1B	A11-0733-05	SUB CHASSIS ASSY		
FM	1B	T42-0532-05	DC MOTOR		
LM	3A	T42-0567-05	DC MOTOR		
PILM	3B	T42-0567-05	DC MOTOR		
PU	1B	T25-0033-05	OPTICAL PICKUP HEAD		
VM	3B	T42-0567-05	DC MOTOR		
LS:Scandinavia YPX(Far East, Hawaii) YAAPES(Europe)	K:USA T:England YA:Australia	P:Canada E:Europe M:Other Areas		S:Singapore made WM:Malaysia made	△ indicates safety critical components.

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IC3, 4		TA8410AK	IC(POWER OP AMP)		
IC5		LA6520	IC(OP AMP X3)		
IC6		UP075217CM-229	MI-COM IC		
IC8		CX101067P	IC(SERIAL-PARALLEL CONVERTER)		
IC9		TC74HC165AP	IC(8BIT SHIFT REGISTER)		
IC10		NJM4558D	IC(OP AMP X2)		
IC11, 12		NJM4580D	IC(OP AMP X2)		
Q1		2SA954(L, K)	TRANSISTOR		
Q2		2SC1740S(Q, R)	TRANSISTOR		
Q3		2SC2785(F, E)	TRANSISTOR		
Q4		DTA124ES	DIGITAL TRANSISTOR		
Q5		2SC2878(B)	TRANSISTOR		
Q6		2SC1740S(Q, R)	TRANSISTOR		
Q7		2SC2785(F, E)	TRANSISTOR		
Q8		2SK246(Y, GR)	FET		
Q9		2SA1175(F, E)	TRANSISTOR		
Q10		2SA933S(Q, R)	TRANSISTOR		
Q11		DTA124ES	DIGITAL TRANSISTOR		
Q12		UN4112	TRANSISTOR		
Q13		2SC2878(B)	TRANSISTOR		
Q14		DTA124ES	DIGITAL TRANSISTOR		
Q15		UN4112	TRANSISTOR		
Q16		2SD1944	TRANSISTOR		
Q17		2SA1175(F, E)	TRANSISTOR		
Q18		2SA933S(Q, R)	TRANSISTOR		
Q19		2SK246(Y, GR)	FET		
Q20		DTA124ES	DIGITAL TRANSISTOR		
Q21		UN4212	TRANSISTOR		
A1		W02-1046-05	ELECTRIC CIRCUIT MODULE		
A2		W02-1046-05	ELECTRIC CIRCUIT MODULE		
MECHANISM (X02-1920-21)					
1	2B	A10-2993-21	CHASSIS		
2	1B	A11-1023-03	SUB CHASSIS ASSY		
3	1B	A11-0700-22	SUB CHASSIS		
4	1A	A11-0701-13	SUB CHASSIS		
11	1B	D10-2490-04	R0D		
12	1B	D10-2495-04	R0D		
13	2B	D10-2496-13	SLIDER		
14	2B	D10-2497-13	SLIDER		
15	2B	D10-2498-13	SLIDER		
16	2A	D10-2500-23	SLIDER		
20	3A	D10-3101-13	SLIDER ASSY		
21	3A	D10-3104-04	R0D		
22	3A	D10-3105-13	SLIDER		
23	3A	D10-3106-13	SLIDER		
24	1A	D10-3107-03	ARM		
25	1A	D10-3108-03	ARM		
26	2A	D10-3109-03	SLIDER		
27	1A	D10-3110-04	ARM		
28	1B	D13-0894-05	GEAR		
29	1B	D13-0895-05	GEAR		
30	1B	D13-0896-05	GEAR		
LS:Scandinavia YPX(Far East, Hawaii) YAAPES(Europe)	K:USA T:England YA:Australia	P:Canada E:Europe M:Other Areas		S:Singapore made WM:Malaysia made	△ indicates safety critical components.

SPECIFICATIONS

[Format]

System	compact disc digital audio system
Laser	Semiconductor laser
Number of channels	2 channels
Playing rotation	200rpm~500rpm(CLV)

[D/A converters]

D/A conversion	1 Bit
Oversampling	8 fs

[Audio]

Frequency response	8Hz~20kHz, $\pm 1.0\text{dB}$
Signal to noise ratio	More than 96dB
Dynamic range	More than 94dB
Total harmonic distortion	Less than 0005%(at 1kHz)
Channel separation	More than 90dB(at 1kHz)
Wow & flutter	Unmeasurable limit
Output level/impedance	
Fixed	2.0V/3.3k Ω
Headphone output(max.)	20mW/32 Ω
	(DP-M6060 only)

[General]

Power consumption	15W
Dimensions	W:440mm(17-5/16")
	H:128mm (5-1/16")
	D:368mm (14-1/2")
Weight(net)	5.4kg(11.9 lb)

Note : KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A.(K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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